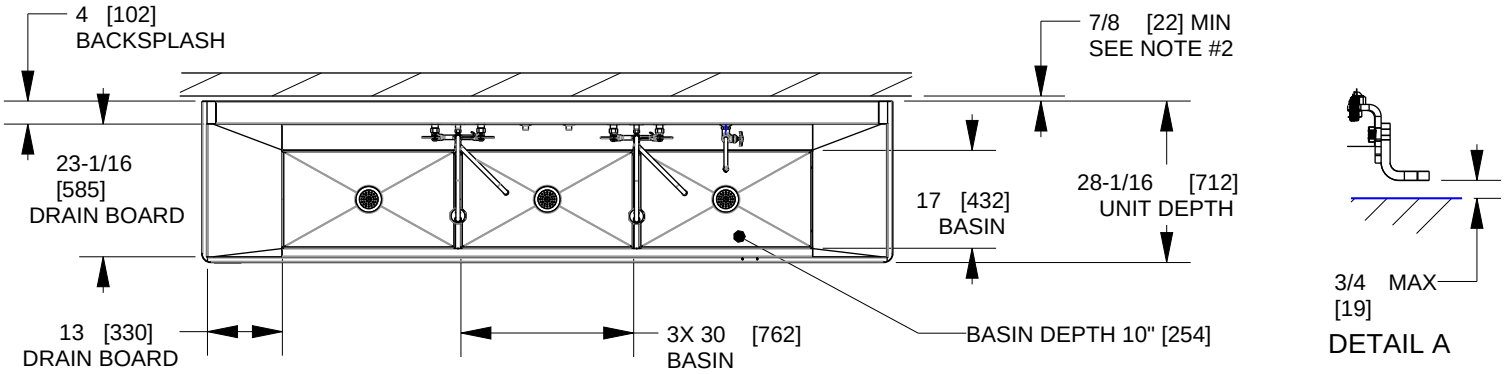
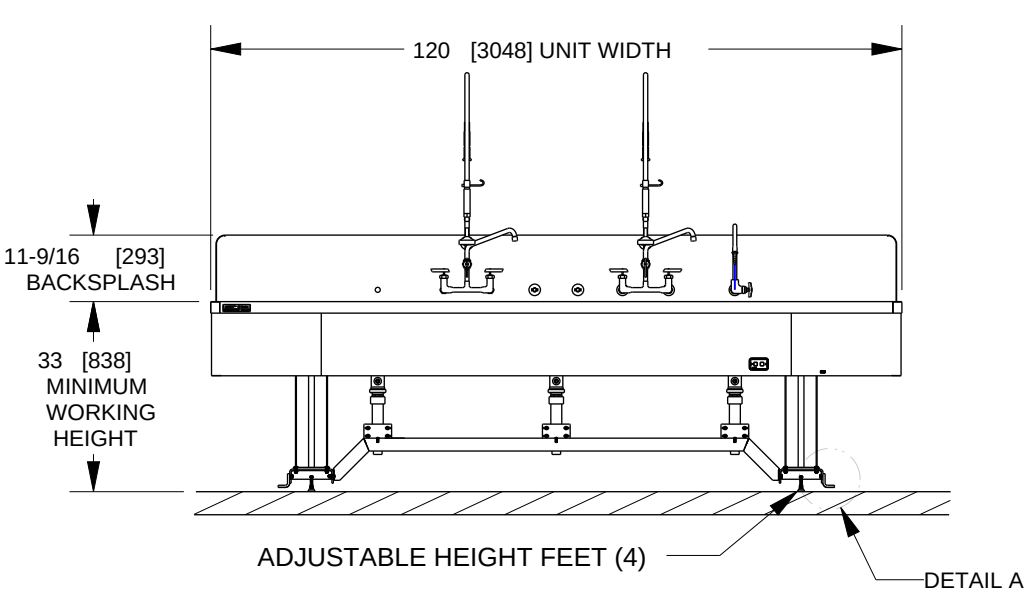
REVISION:	ECN #:	REVISION HISTORY	△ DEPICTS CHANGES FROM PRIOR REVISION
F	106432		

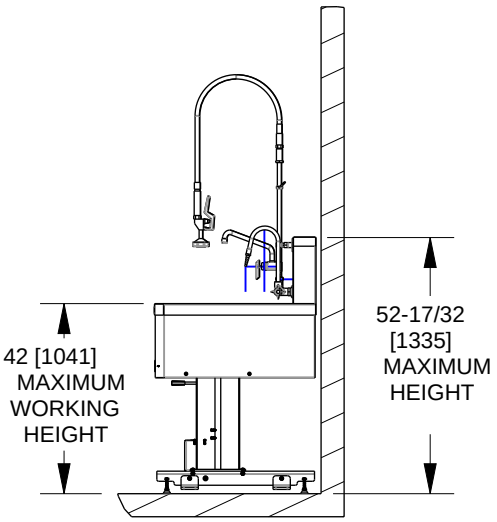
INDEX	DESCRIPTION OF CHANGE
1	SHEET 1- NOTE 2 ADDED MINIMUM. NOTE 4 CHANGED 300 TO 304
2	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM 1/2" NPSM TO 3/8" COMPRESSION (2 PLACES)
3	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM QUICK CONNECTOR FLEX COIL TO 3/8" COMPRESSION
4	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM 1/2" NPSM WITH ...ADAPTER (INCLUDED)C TO 1/2" NPT
5	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM 1/4" NPFT HOSE INCLUDED TO 1/4" NPT
6	SHEET 3- CHANGED NOTE 5 FROM "PREVENTED" TO "PREVENTION"
7	SHEET 4- CHANGED WALL AND FLOOR VIEW DRAIN DETAILS AND NOTES
8	SHEET 4- MOVED SEISMIC ANCHOR VIEW TO SHEET 6
9	SHEET 6- ADDED NOTE 2



TOP VIEW



FRONT VIEW



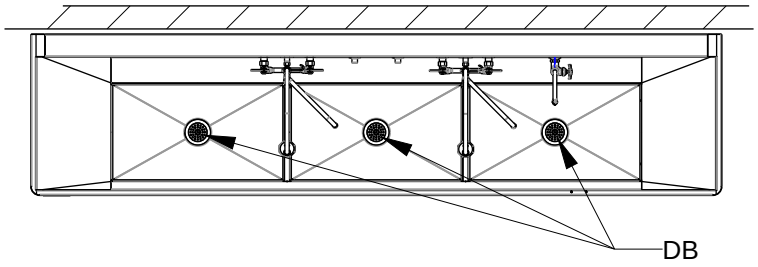
RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

NOTES:
1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES [MM].
2. INSTALLER MUST MAINTAIN A MINIMUM GAP OF .875" TO ALL ADJACENT WALLS AS PINCH POINT PROTECTION.
3. UNIT TO BE INSTALLED AGAINST A WALL, FOR BACK TO BACK INSTALLATION A PONY WALL IS REQUIRED.
4. 304 SERIES STAINLESS STEEL CONSTRUCTION.
5. PONY WALL HEIGHT MUST BE 53"[1346].
6. WALL MUST BE FREE OF OBSTRUCTIONS TO 54"[1372].

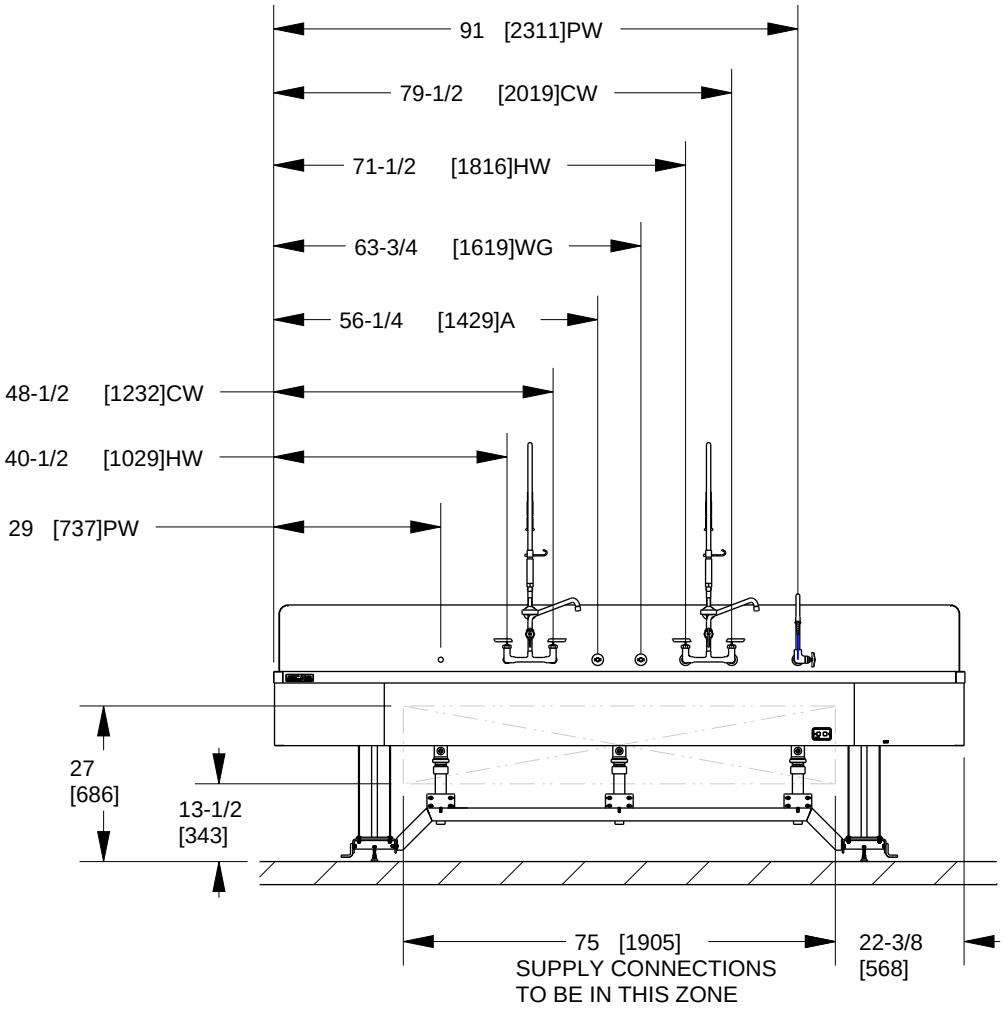
STERIS Corporation

TITLE: 3 BASIN 120" ADJUSTABLE HEIGHT REPROCESSING SINK

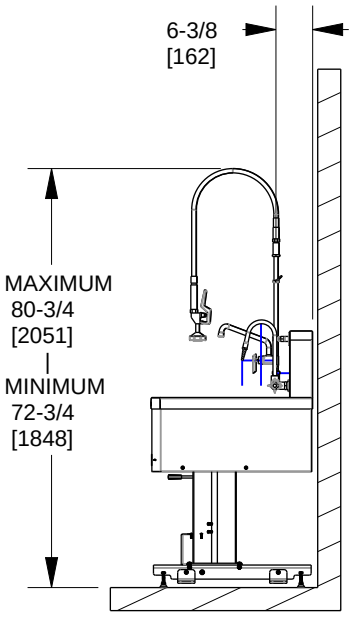
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1.000	Kosir, Joe	SINK50120 F.7	11002996	F



HW	HOT WATER
CW	COLD WATER
PW	PURE WATER
WG	WATER GUN
A	COMPRESSED AIR
DB	DRAIN BASKET (BASIN)
D	DRAIN



FRONT VIEW



RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

NOTE: WORKFLOW CAN BE REVERSED BY MOVING PURE WATER FAUCET
FROM RIGHT SIDE TO HOLE ON LEFT THAT IS CAPPED.
ADDITIONALLY THE COMPRESSED AIR AND WATER GUN FIXTURES SHOULD BE SWAPPED.

STERIS Corporation

TITLE: 3 BASIN 120" ADJUSTABLE HEIGHT REPROCESSING SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1.000	Kosir, Joe	SINK50120 F.7	11002996	F

ADJ. HEIGHT PROCESSING TRIPLE SINK 120" X 28" X 33"-41"

UTILITY REQUIREMENTS CHART (PLUMBING)

UTILITY	PARAMETER	REQUIREMENT	NOTES
HOT WATER (HW)	CONNECTION TYPE/SIZE	3/8" COMPRESSION	F
	PRESSURE RANGE	15 TO 125 PSI	
	OPERATING FLOW RATE	1.6 GPM @ MAX PSI	
	TEMPERATURE RANGE	40° F TO 180° F	
	WATER QUALITY	SEE NOTE #2	F
COLD WATER (CW)	CONNECTION TYPE/SIZE	3/8" COMPRESSION	
	PRESSURE RANGE	15 TO 125 PSI	
	OPERATING FLOW RATE	1.6 GPM @ MAX PSI	
	TEMPERATURE RANGE	70° F MAX	
	WATER QUALITY	SEE NOTE #2	
PURE WATER (PW)	CONNECTION TYPE/SIZE	1/2" NPT	F
	PRESSURE RANGE	20 TO 125 PSI	
	OPERATING FLOW RATE	.25 TO 2.00 GPM ±15%	
	TEMPERATURE RANGE	40° F TO 140° F	
	WATER QUALITY		
WATER GUN (WG)	CONNECTION TYPE/SIZE	3/8" COMPRESSION	F
	PRESSURE RANGE	0 TO 44 PSI	
	OPERATING FLOW RATE		
	TEMPERATURE RANGE	40° F TO 125° F	F
	WATER QUALITY	SEE NOTE #2	
AIR GUN (A)	CONNECTION TYPE/SIZE	1/4" NPT	CONNECTION MUST BE MADE PER LOCAL CODE
	PRESSURE	30 PSI MAX	
	TIP 1	CONSUMPTION AT 30 PSI	2 SCFM
	TIP 2		
	TIP 3		
	TIP 4		
	TIP 5		
	TIPS 4 & 5 MUST BE OPERATED AT 30 PSI OR LESS TO COMPLY WITH OSHA DIRECTIVE		
BASIN DRAIN (BD)	CONNECTION TYPE	∅ 1-1/2" ABS P-TRAP (INCLUDED) ∅ 2" COPPER P-TRAP (ACCESSORY)	DRAIN RATE AT 20 GPM EACH BASIN (ESTIMATED)

NOTES:
1. SUPPLY LINES FOR EACH CONNECTION ARE SHIPPED WITH EACH SINK.
2. STERIS RECOMMENDS THE FOLLOWING WATER QUALITY PARAMETERS:
   1. 100-200 PPM (500PPM MAX) TOTAL DISOLVED SOLIDS.
   2. 70-120 PPM (180PPM MAX) TOTAL ALKALINITY.
   3. 6.8-7.0PH (7.5 MAX).
   4. 0.1-0.5PPM (1.0PPM MAX) TOTAL SILICA.
3. STERIS DOES NOT SUPPLY A PRESSURE REGULATOR FOR USE WITH AIR GUN.
4. STERIS DOES NOT SUPPLY A PRESSURE REDUCING VALVE FOR USE WITH WATER GUN.
5. BACK FLOW PREVENTION BY CUSTOMER AGAINST BACK SIPHONAGE MAY BE REQUIRED (CHECK LOCAL PLUMBING CODE).
6. FLOOR SINK OUTLET NEEDS TO BE ABLE TO ACCOMODATE WASTE FROM ALL BAYS (CHECK LOCAL PLUMBING CODE).
7. REFERENCES FOR PARAMETERS ARE TO MANUFACTURER'S RECOMMENDATION AND SHOULD BE FOLLOWED ACCORDINGLY.

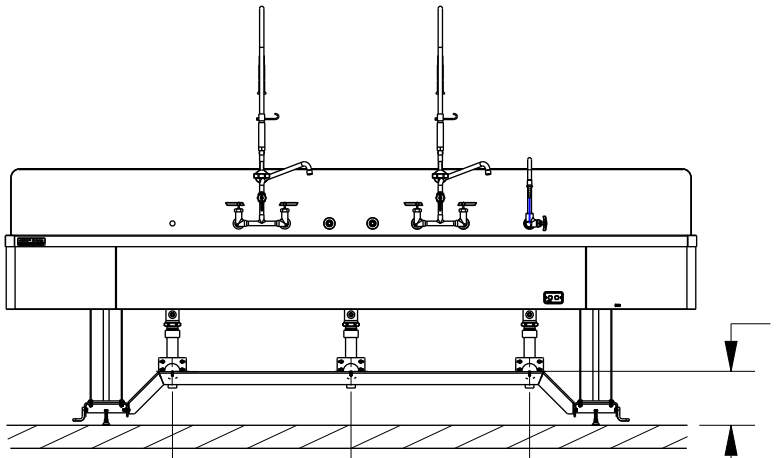
F

STERIS Corporation

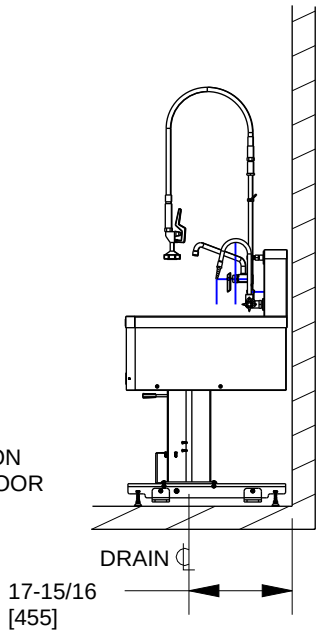
TITLE: 3 BASIN 120" ADJUSTABLE HEIGHT REPROCESSING SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1.000	Kosir, Joe	SINK50120 F.7	11002996	F

F DRAIN LOCATION, (WALL)



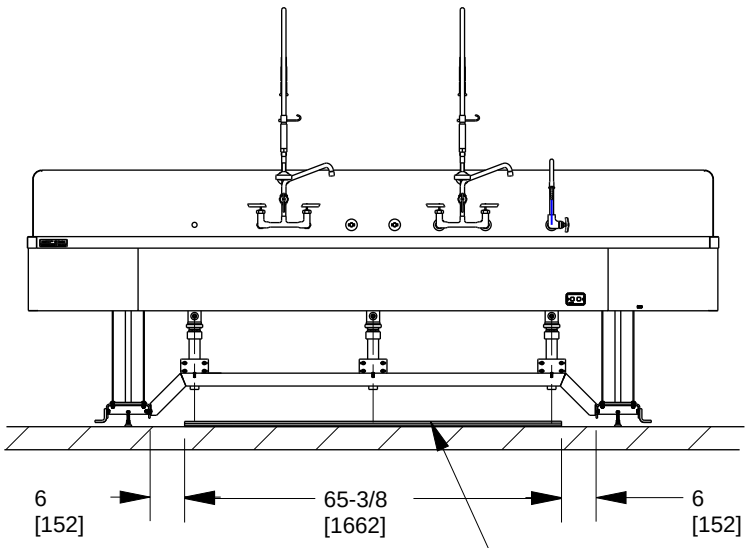
FRONT VIEW



RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

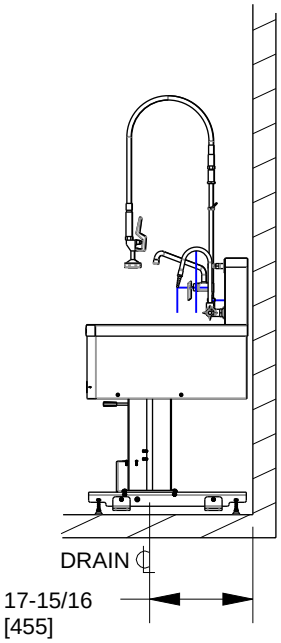
F WALL NOTES:
1. EACH DRAIN INDIVIDUALLY TRAPPED.
2. WHEN TRAPS ARE NOT REQUIRED, ELBOWS CAN BE PURCHASED LOCALLY.
3. ROUGH-IN TOLERANCE ± 3/8"

F DRAIN LOCATION, (FLOOR)



FRONT VIEW

FLOOR DRAIN CONNECTIONS
TO BE IN THIS ZONE



RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

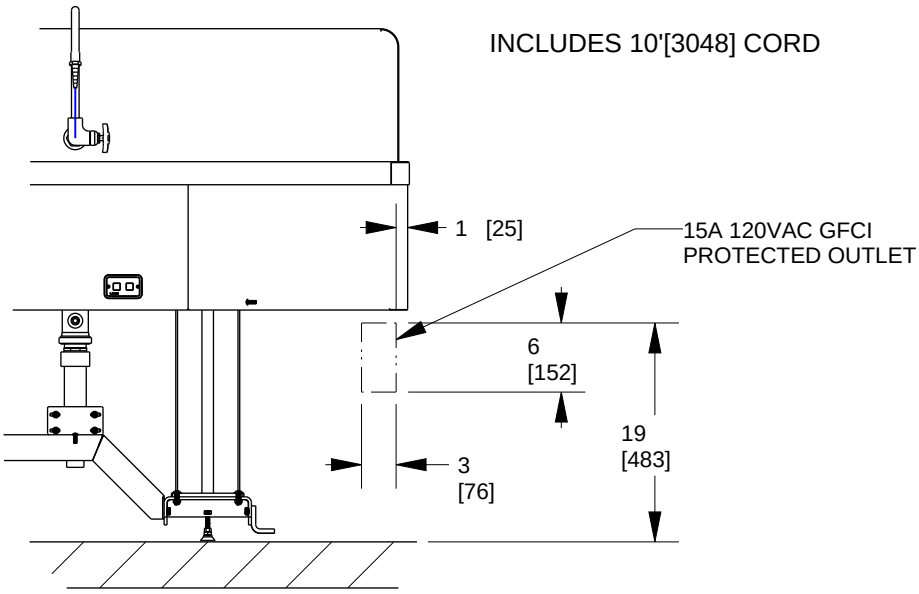
F FLOOR NOTES:
1. FLOOR DRAIN IS PREFERED.
2. DRAIN CANNOT BE LOCATED WITHIN 6" OF LEGS.

STERIS Corporation

TITLE: 3 BASIN 120" ADJUSTABLE HEIGHT REPROCESSING SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1.000	Kosir, Joe	SINK50120 F.7	11002996	F

UTILITY (ELECTRICITY)
CONNECTION POSITION
RECOMMENDED



PARTIAL FRONT VIEW

ADJ. HEIGHT REPROCESSING TRIPLE SINK 120" X 28" X 33" TO 41"

UTILITY SPECIFICATIONS CHART (ELECTRICAL)

ELECTRICITY

UTILITY	PARAMETER	REQUIREMENT	NOTES
ELECTRICITY	120V	15A GFCI PROTECTED OUTLET	

LINAK DL2 LIFT SYSTEM

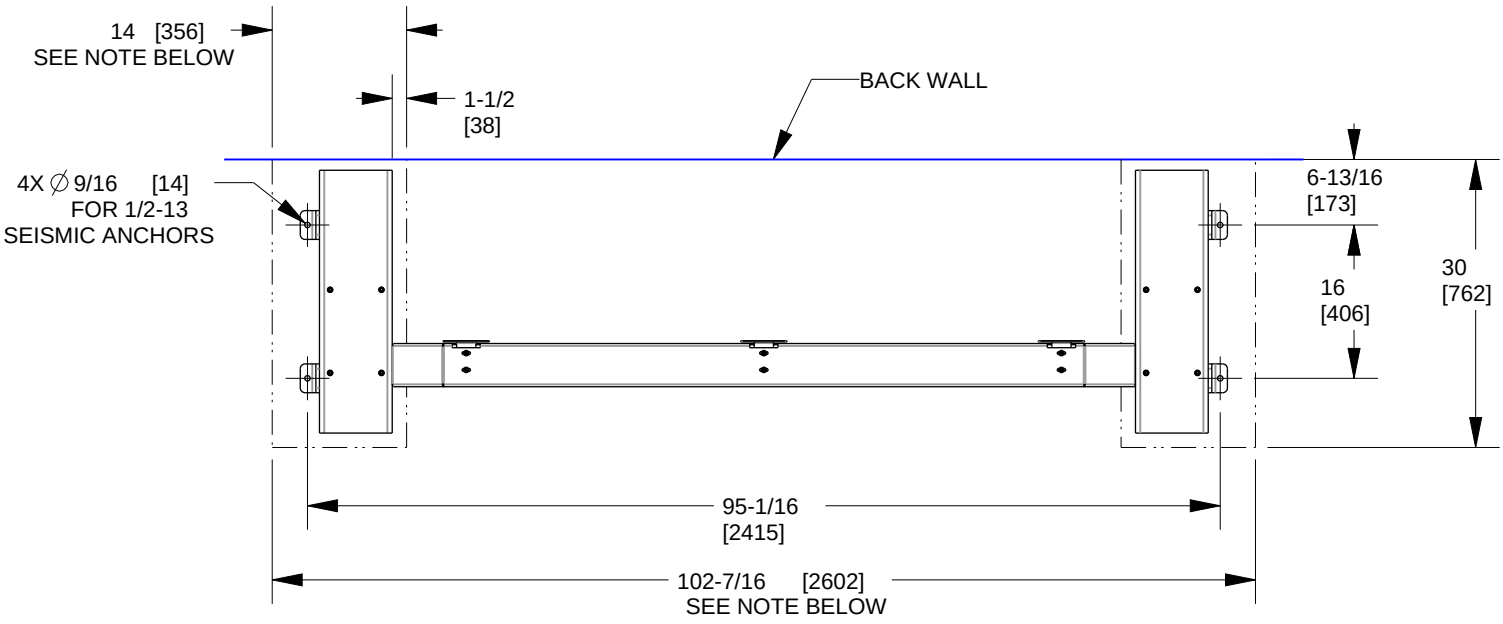
LINAK DL2 LIFT SYSTEM	WEIGHT CAPACITY	562LBS [2500 N] EACH	
	ADJUSTMENT RANGE	8.0" [203,2]	
	LIFT SPEED	UP TO 3/8"[10] PER SECOND	
	VOLTAGE	120VAC, 3A	WITH OVERLOAD PROTECTION

STERIS Corporation

TITLE: 3 BASIN 120" ADJUSTABLE HEIGHT REPROCESSING SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1.000	Kosir, Joe	SINK50120 F.7	11002996	F

SEISMIC ANCHOR HOLE POSITIONS



NOTE:

F

1. CONCRETE FLOOR MUST REMAIN FREE OF DEFECTS IN THESE AREAS FOR INSTALLATION OF SEISMIC ANCHORS (NOT PROVIDED BY STERIS).
2. REFER TO EQUIPMENT SPECIFIC SEISMIC DRAWING FOR MORE INFORMATION.

PHYSICAL SPECIFICATIONS	
SHIPPING DIMENSIONS L X W X H	132L X 36W X 48H
SHIPPING WEIGHT	690 LBS
OPERATING DIMENSIONS L X W X H	120" X 28" X 44-9/16" TO 52-9/16" [3048 X 711 X 1132 TO 1412]
OPERATING WEIGHT EMPTY	490 LBS
WORKING HEIGHT	33"[838] TO 41"[1041]

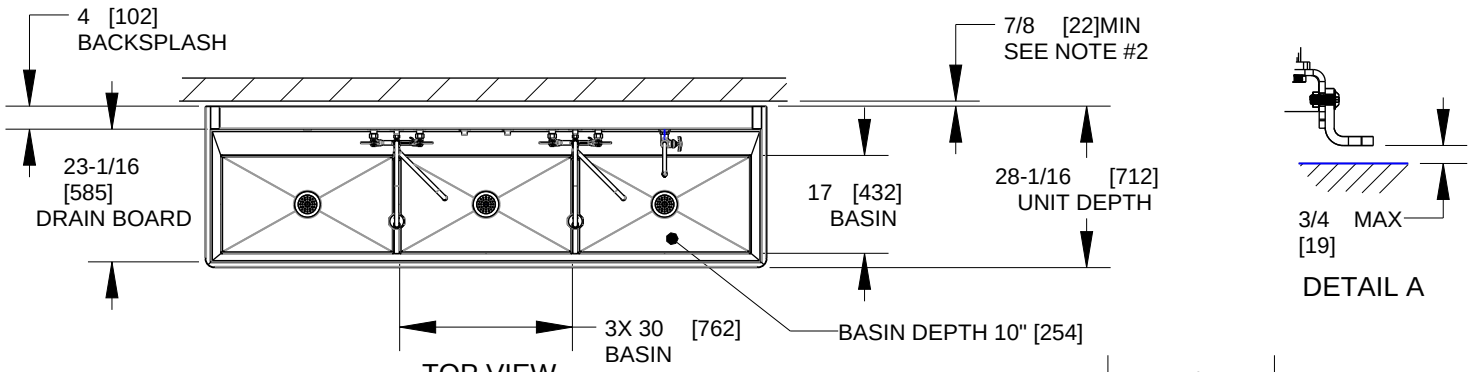
STERIS Corporation

TITLE: 3 BASIN 120" ADJUSTABLE HEIGHT REPROCESSING SINK

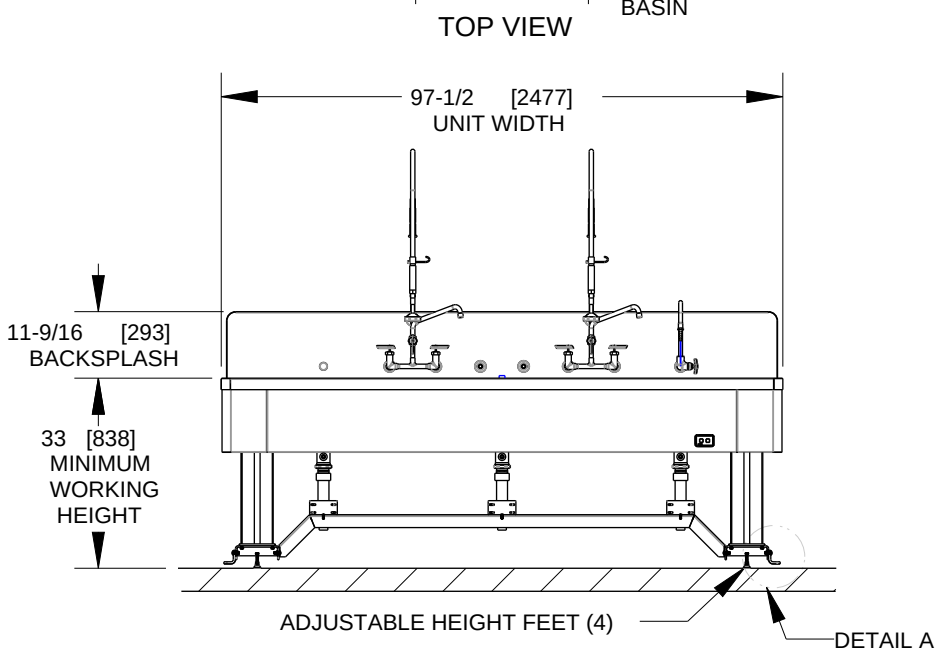
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1.000	Kosir, Joe	SINK50120 F.7	11002996	F

REVISION:	ECN #:	REVISION HISTORY	△ DEPICTS CHANGES FROM PRIOR REVISION
F	106432		

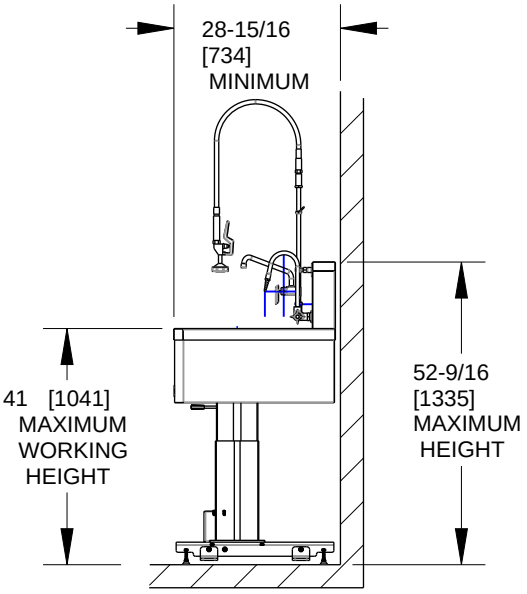
INDEX	DESCRIPTION OF CHANGE
1	ADD 2" COPPER P-TRAP AS ACCESSORY UNDER UTILITY REQUIREMENTS ALONG WITH ESTIMATED DRAIN RATE
2	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM 1/2" NPSM TO 3/8" COMPRESSION (2 PLACES)
3	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM QUICK CONNECTOR FLEX COIL TO 3/8" COMPRESSION
4	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM 1/2" NPSM WITH ...ADAPTER (INCLUDED)C TO 1/2" NPT
5	SHEET 3- CHANGED UTILITY REQUIREMENTS FROM 1/4" NPFT HOSE INCLUDED TO 1/4" NPT
6	SHEET 3- CHANGED NOTE 5 FROM "PREVENTED" TO "PREVENTION"
7	SHEET 4- CHANGED WALL AND FLOOR VIEW DRAIN DETAILS AND NOTES
8	SHEET 4- MOVED SEISMIC ANCHOR VIEW TO SHEET 6
9	SHEET 6- ADDED NOTE 2



TOP VIEW



FRONT VIEW



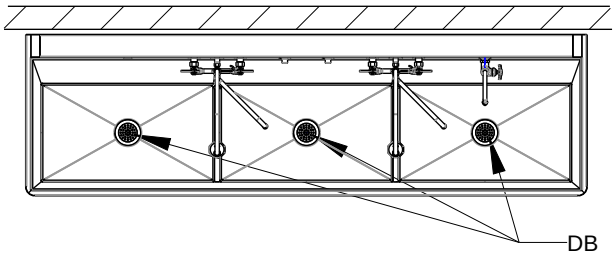
RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

F NOTES:
F 1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN INCHES [MM].
2. INSTALLER MUST MAINTAIN A MINIMUM GAP OF .875" TO ALL ADJACENT WALLS AS PINCH POINT PROTECTION.
3. UNIT TO BE INSTALLED AGAINST A WALL, FOR BACK TO BACK INSTALLATION A PONY WALL IS REQUIRED.
4. 304 SERIES STAINLESS STEEL CONSTRUCTION.
5. PONY WALL HEIGHT MUST BE 53"[1346].
6. WALL MUST BE FREE OF OBSTRUCTIONS TO 54"[1372].

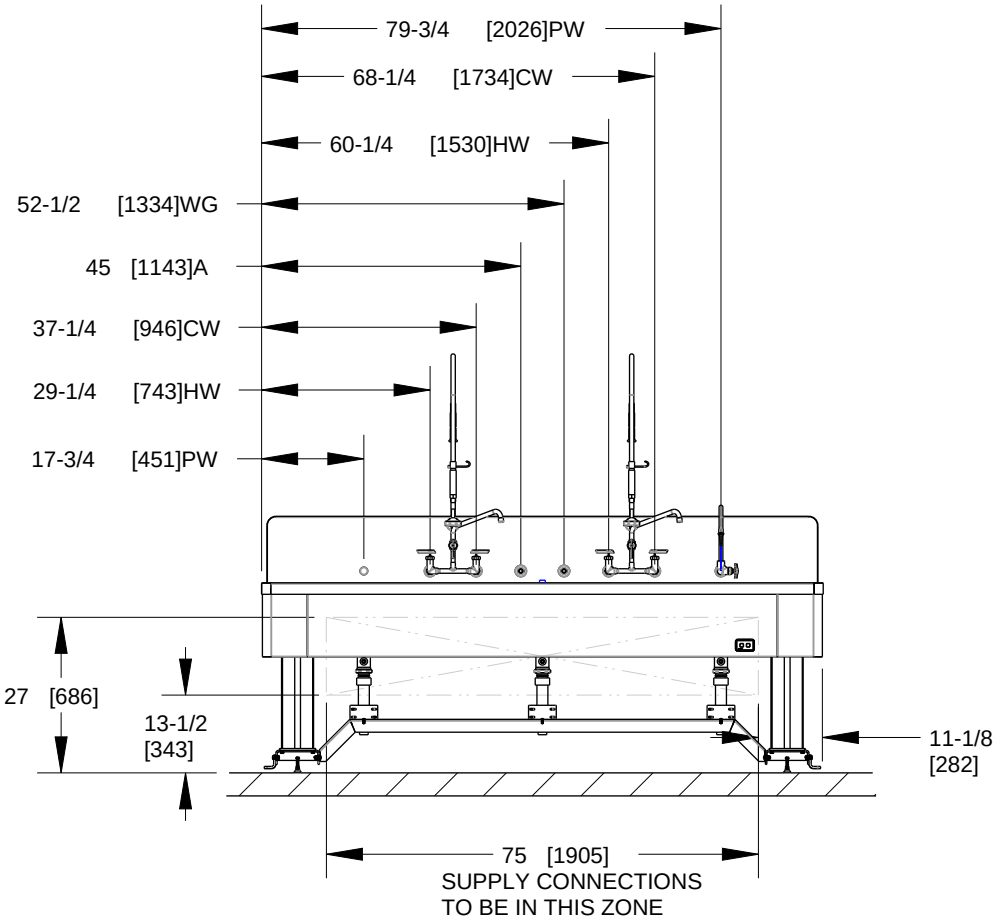
STERIS Corporation

TITLE: 3 BASIN 97.5" ADJUSTABLE HEIGHT REPROCESS SINK

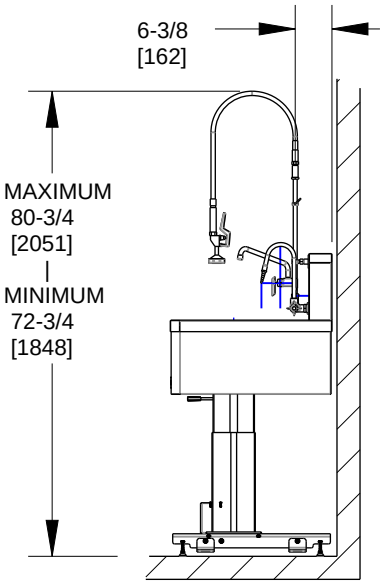
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	0.022	Kosir, Joe	SINK5097 F.3	11002999	F



HW	HOT WATER
CW	COLD WATER
PW	PURE WATER
WG	WATER GUN
A	COMPRESSED AIR
DB	DRAIN BASKET (BASIN)
D	DRAIN



FRONT VIEW



RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

NOTE: WORKFLOW CAN BE REVERSED BY MOVING PURE WATER FAUCET
FROM RIGHT SIDE TO HOLE ON LEFT THAT IS CAPPED.
ADDITIONALLY THE COMPRESSED AIR AND WATER GUN FIXTURES SHOULD BE SWAPPED.

STERIS Corporation

TITLE: 3 BASIN 97.5" ADJUSTABLE HEIGHT REPROCESS SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	0.016	Kosir, Joe	SINK5097 F.3	11002999	F

ADJ. HEIGHT PROCESSING TRIPLE SINK 97.5" X 28" X 33"-41"

UTILITY REQUIREMENTS CHART (PLUMBING)

UTILITY	PARAMETER	REQUIREMENT	NOTES
HOT WATER (HW)	CONNECTION TYPE/SIZE	3/8" COMPRESSION	F
	PRESSURE RANGE	15 TO 125 PSI	
	OPERATING FLOW RATE	1.6 GPM @ MAX PSI	
	TEMPERATURE RANGE	40° TO 180° F	F
	WATER QUALITY	SEE NOTE #2	
COLD WATER (CW)	CONNECTION TYPE/SIZE	3/8" COMPRESSION	F
	PRESSURE RANGE	15 TO 125 PSI	
	OPERATING FLOW RATE	1.6 GPM @ MAX PSI	
	TEMPERATURE RANGE	70° F MAX	
	WATER QUALITY	SEE NOTE #2	
PURE WATER (PW)	CONNECTION TYPE/SIZE	1/2" NPT	F
	PRESSURE RANGE	20 TO 125 PSI	
	OPERATING FLOW RATE	.25 TO 2.00 GPM ±15%	
	TEMPERATURE RANGE	40° F TO 140° F	
	WATER QUALITY		
WATER GUN (WG)	CONNECTION TYPE/SIZE	3/8" COMPRESSION	F
	PRESSURE RANGE	0 TO 44 PSI	
	OPERATING FLOW RATE		
	TEMPERATURE RANGE	40° F TO 125° F	F
	WATER QUALITY	SEE NOTE #2	
AIR GUN (A)	CONNECTION TYPE/SIZE	1/4" NPT	CONNECTION MUST BE MADE PER LOCAL CODE
	PRESSURE	30 PSI MAX	
	TIP 1	CONSUMPTION AT 30 PSI	2 SCFM
	TIP 2		
	TIP 3		
	TIP 4		
	TIP 5		
	TIPS 4 & 5 MUST BE OPERATED AT 30 PSI OR LESS TO COMPLY WITH OSHA DIRECTIVE		
BASIN DRAIN (BD)	CONNECTION TYPE	∅ 1-1/2" ABS P-TRAP (INCLUDED) ∅ 2" COPPER P-TRAP (ACCESSORY)	DRAIN RATE AT 20 GPM EACH BASIN (ESTIMATED)

NOTES:
1. SUPPLY LINES FOR EACH CONNECTION ARE SHIPPED WITH EACH SINK.
2. STERIS RECOMMENDS THE FOLLOWING WATER QUALITY PARAMETERS:
   1. 100-200 PPM (500PPM MAX) TOTAL DISOLVED SOLIDS.
   2. 70-120 PPM (180PPM MAX) TOTAL ALKALINITY.
   3. 6.8-7.0PH (7.5 MAX).
   4. 0.1-0.5PPM (1.0PPM MAX) TOTAL SILICA.
3. STERIS DOES NOT SUPPLY A PRESSURE REGULATOR FOR USE WITH AIR GUN.
4. STERIS DOES NOT SUPPLY A PRESSURE REDUCING VALVE FOR USE WITH WATER GUN.

F 5. BACK FLOW PREVENTION BY CUSTOMER AGAINST BACK SIPHONAGE MAY BE REQUIRED (CHECK LOCAL PLUMBING CODE).

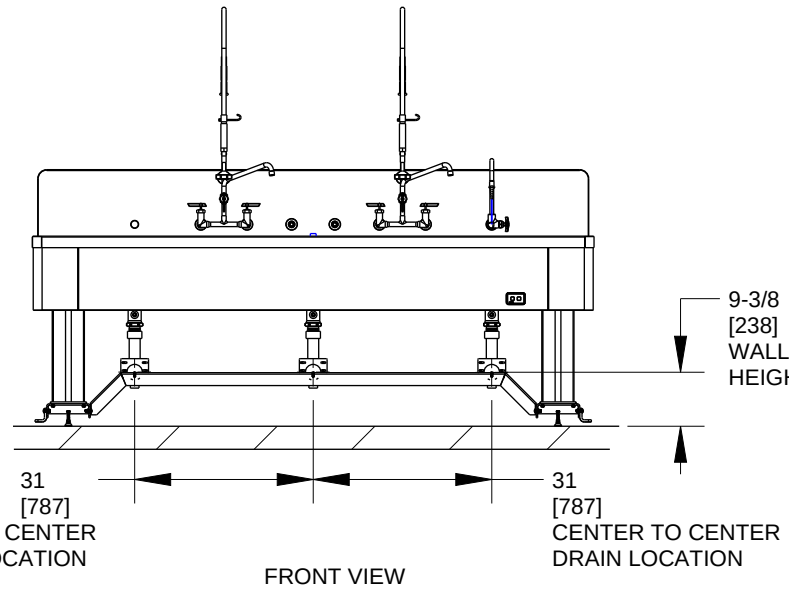
6. FLOOR SINK OUTLET NEEDS TO BE ABLE TO ACCOMODATE WASTE FROM ALL BAYS (CHECK LOCAL PLUMBING CODE).
7. REFERENCES FOR PARAMETERS ARE TO MANUFACTURER'S RECOMMENDATION AND SHOULD BE FOLLOWED ACCORDINGLY.

STERIS Corporation

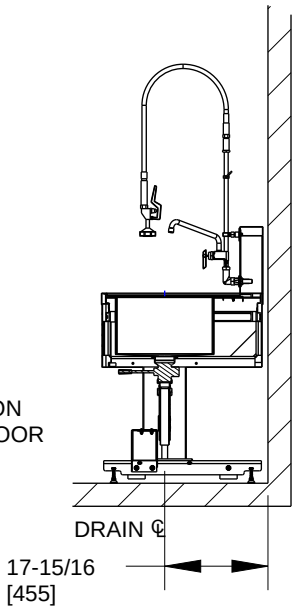
TITLE: 3 BASIN 97.5" ADJUSTABLE HEIGHT REPROCESS SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	0.016	Kosir, Joe	SINK5097 F.3	11002999	F

F DRAIN LOCATION, (WALL)



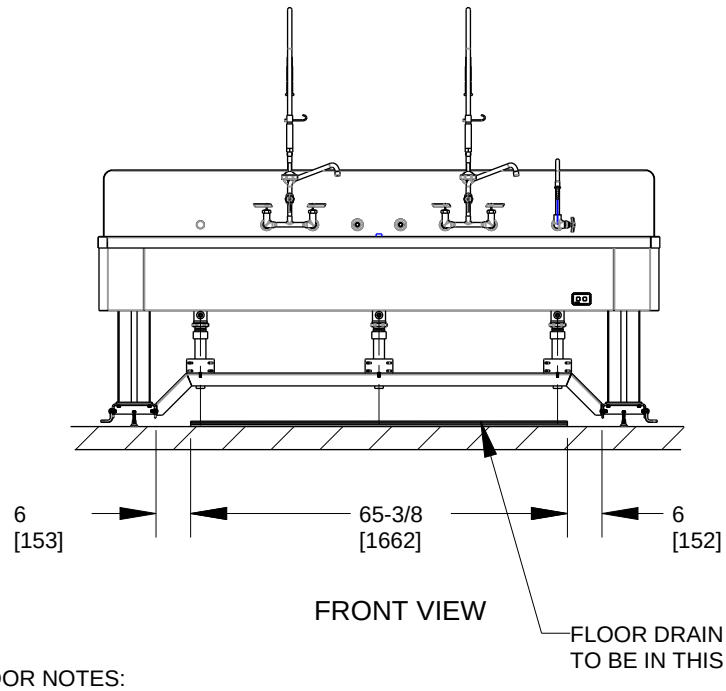
FRONT VIEW



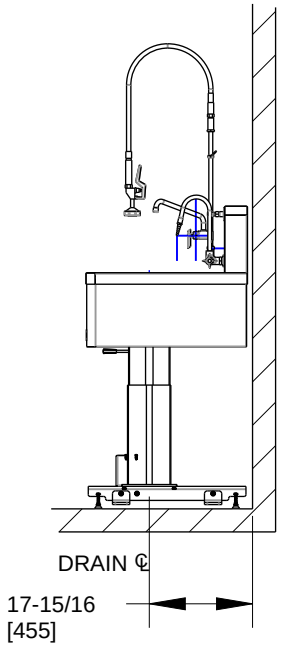
RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

WALL NOTES:
F
1. EACH DRAIN INDIVIDUALLY TRAPPED.
2. WHEN TRAPS ARE NOT REQUIRED, ELBOWS CAN BE PURCHASED LOCALLY.
3. ROUGH-IN TOLERANCE ±3/8"

F DRAIN LOCATION, (FLOOR)



FRONT VIEW



RIGHT SIDE VIEW
SHOWN AT
MAX HEIGHT

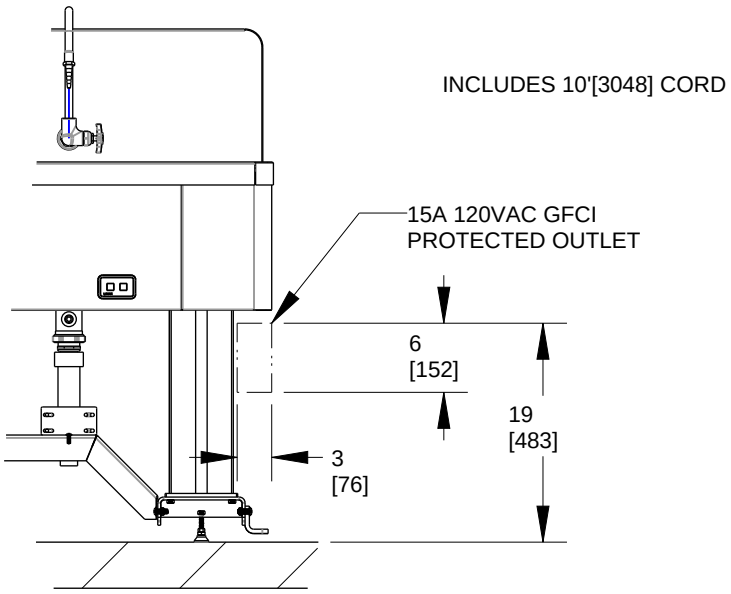
FLOOR NOTES:
F
1. FLOOR DRAIN IS PREFERED.
2. DRAIN CANNOT BE LOCATED WITHIN 6" OF LEGS.

STERIS Corporation

TITLE: 3 BASIN 97.5" ADJUSTABLE HEIGHT REPROCESS SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	0.016	Kosir, Joe	SINK5097 F.3	11002999	F

UTILITY (ELECTRICITY)
CONNECTION POSITION
RECOMMENDED



PARTIAL FRONT VIEW

ADJ. HEIGHT REPROCESSING TRIPLE SINK 97.5" X 28" X 33" TO 41"			
UTILITY SPECIFICATIONS CHART (ELECTRICAL)			
ELECTRICITY			
UTILITY	PARAMETER	REQUIREMENT	NOTES
ELECTRICITY	120V	15A GFCI PROTECTED OUTLET	
LINAK DL2 LIFT SYSTEM			
LINAK DL2 LIFT SYSTEM	WEIGHT CAPACITY	562LBS [2500 N] EACH	
	ADJUSTMENT RANGE	8.0" [203,2]	
	LIFT SPEED	UP TO 3/8"[10] PER SECOND	
	VOLTAGE	120VAC, 3A	WITH OVERLOAD PROTECTION

STERIS Corporation

TITLE: 3 BASIN 97.5" ADJUSTABLE HEIGHT REPROCESS SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
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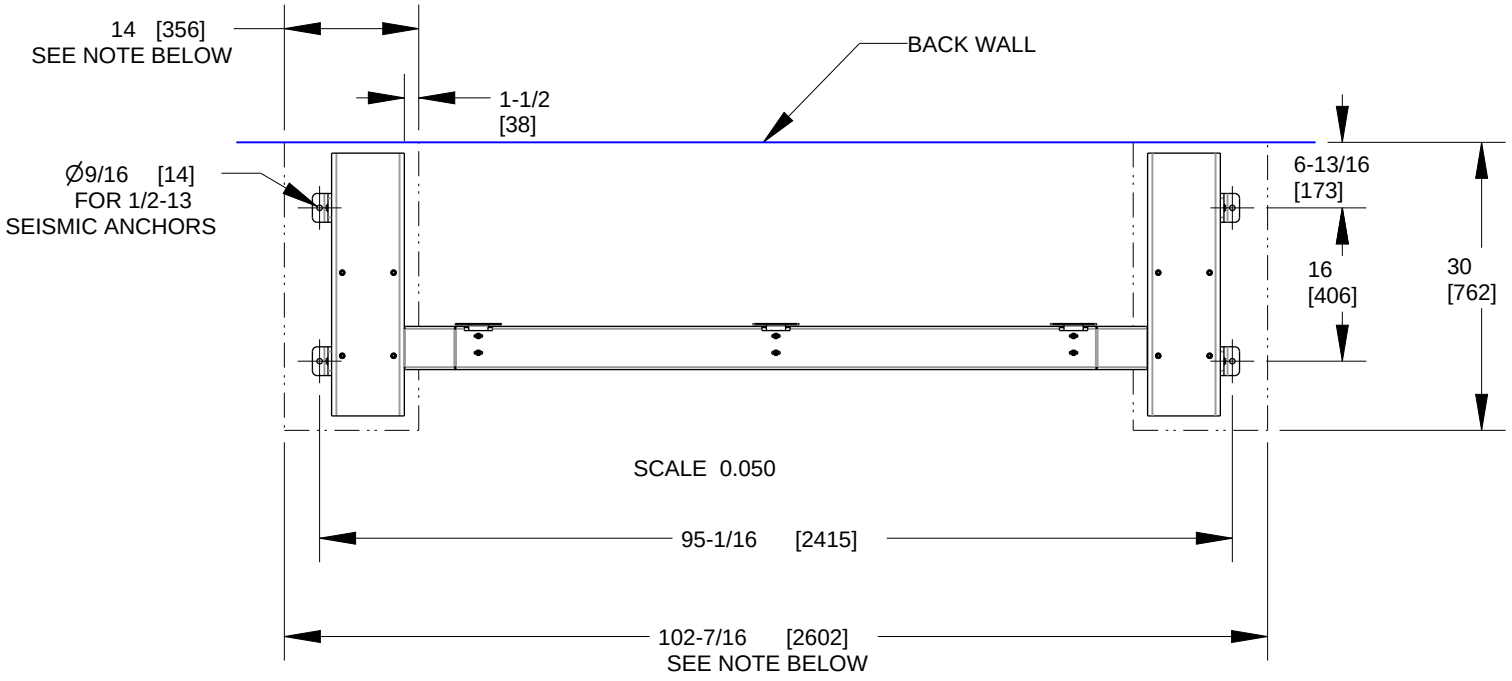
SEISMIC ANCHOR HOLE POSITIONS



NOTE:

1. CONCRETE FLOOR MUST REMAIN FREE OF DEFECTS IN THESE AREAS FOR INSTALLATION OF SEISMIC ANCHORS (NOT PROVIDED BY STERIS).
2. REFER TO EQUIPMENT SPECIFIC SEISMIC DRAWING FOR MORE INFORMATION.

F

PHYSICAL SPECIFICATIONS

SHIPPING DIMENSIONS L X W X H	132L X 36W X 48H
SHIPPING WEIGHT	580 LBS
OPERATING DIMENSIONS L X W X H	97.5" X 28" X 44-9/16" TO 52-9/16" [2477 X 711 X 1132 TO 1412]
OPERATING WEIGHT EMPTY	380 LBS
WORKING HEIGHT	33"[838] TO 41"[1041]

TOLERANCES: +/- INCH (MM) IF NOT INDICATED OTHERWISE

	DIMENSION	0-48	48+
MACHINING	FRAC.	1/64	1/32
	DEC.	0.005	0.015
SHEET METAL / SAWING		1/32	1/16

	DIMENSION	0-1	1+
BORING		0.001	0.002
SURFACE FINISH	63√ machined surface (Visual)		

	DIMENSION	0-4	4-24	24+
PLASTIC	FRAC.	1/64	1/32	1/16
	DEC.	0.005	0.020	N/A

DIMENSION	0-12	12-60	60+
WELDED ASSEMBLY	1/32	1/16	3/32
SPOT WELD	1/16		3/32
SQUARENESS	1/16 total		1/8 total

MATERIAL / NOTES

NA
FINISH: NA

COMPONENT/ASSEMBLY MUST BE RoHS COMPLIANT

DIMENSION	0-3/8	3/8-3/4	3/4 +
HOLE DIAMETER	0.005	0.015	1/32
ANGLE	1°	WEIGHT: [.2] LBS.	

STERIS Corporation

TITLE: 3 BASIN 97.5" ADJUSTABLE HEIGHT REPROCESS SINK

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	0.022	Kosir, Joe	SINK5097 F.3	11002999	F

ENDODRY™

Drying and Storage Cabinet | Compressed Air Requirements

The ENDODRY™ Drying and Storage Cabinet requires compressed air which must meet specific incoming air quality requirements. This ensures optimal cabinet performance with continuous air flow to safely eliminate all residual water from the endoscopes being dried, which may otherwise promote the growth of organisms.

ENDODRY Cabinet Air Requirements

1. **Quality: ISO 8573-1:2010 minimum class 1.4.1, recommended class 1.2.1**
   - Particle Size: Incoming air filtered down to 1 micron in size
   - Moisture Content: Minimum pressure dew point (PDP) of +3°C or better required and no liquid water, -40°C or better recommended
   - Oil Content: < 0.01mg of oil per cubic meter of compressed air (liquid, aerosol or vapor oil)
2. **Pressure:** The below pressures are required at the point of cabinet connection. Consult with the Facilities Maintenance Department or qualified air vendor to identify potential losses in air supply.
   - ENDODRY Cabinet for ADVANTAGE PLUS™ Hookups: 29 – 145 psi (2 – 10 bar)
   - ENDODRY Cabinet for DSD Hookups: 73-145 psi (5 – 10 bar)
3. **Volume Flow:** The below volume flows are required at the point of cabinet connection.
   - ENDODRY Cabinet for ADVANTAGE PLUS Hookups: Max demand of 4.2 scfm (120 l/min ANR) per cabinet
   - ENDODRY Cabinet for DSD Hookups: Max demand of 7 scfm (200 l/min ANR) per cabinet

Given the air volume flow demand difference, the ENDODRY Cabinet for ADVANTAGE PLUS Hookups is recommended when using or moving to the ADVANTAGE PLUS™ Automated Endoscope Reprocessor platform. This recommendation also applies to non-Medivators AER's, due to lower air consumption and potential ADVANTAGE PLUS Endoscope Reprocessor upgrade later.

ENDODRY Cabinet Air Grade

Instrument Air (NFPA 99) is the recommended grade of air to use with the ENDODRY Cabinet. Additional particulate filtration may be required to meet the ISO class listed above. If house/facility grade air is used (or other inferior air source), additional air treatment may also be needed to achieve the moisture and oil content listed above. Medical facilities will need to consult their Facilities Maintenance Department or their qualified air vendor to identify additional filtration needs to meet the air requirements listed above.

CANTEL

Air Responsibility

- The medical facility is responsible for selecting and supplying their compressed air solution.
- The facility should consult their internal Facilities Maintenance Department or a qualified air vendor.
- The facility should have an air backup plan, as air compressors require service and maintenance.
- To assist facilities, Medivators has compiled a list of compressors below that can be purchased directly from either the manufacturer or an authorized dealer. However, Medivators has not validated and does not endorse any of the listed compressors, and is not responsible for air compressor warranty, service and maintenance. The list has been compiled based on no additional air demand and supply plumbing of 100ft or less. Work with the air supply vendor or Facilities Maintenance Department for the specific application.

ADVANTAGE PLUS™ Reprocessor Hookups			DSD Hookups		
# of Cabinets	BeaconMedaes (w/ Additional Dryer)	Powerex (w/ Dryer)	# of Cabinets	BeaconMedaes (w/ Additional Dryer)	Powerex (w/ Dryer)
1	LES03-145T-RD	SES0308TM**	1	LES05-145T-RD	SES0508TM**
2	LES05-145T-RD	SES0508TM**	2	LES10-145RD	LSE1504
3	LES07-145T-RD	LSE1504	3	LES15-145RD	LSE1504
4	LES10-145T-RD	LSE1504	4	LES20-145RD	LSE2005
5	LES15-145RD	LSE1504	5	LES20-145RD	LSE2005

Additional capacities are available. Contact Vendor for additional details.
Compressor sizes assume the inclusion of a desiccant drying solution to obtain a pressure dew point (PDP) of -40°C or better.

Systems are available with 208V/230V/460V
**Single-phase systems may need additional receiver
Footprint Ranges from 26”x40” to 66”x30” depending on compressor size (with heights from 46” to 62”)
Powerex Contact Information: 1-888-769-7979 or http://www.powerexinc.com/
BeaconMedaes Contact Information: 1-888-463-3427 (Option 2 - Tech Support, Option 3 - customer service) or www.beaconmedaes.com (includes regional directory)

CANTEL

Medivators Headquarters
14605 28th Avenue North
Minneapolis, Minnesota 55447
Tel: 1.800.444.4729

www.cantelmedical.com

ISO 128-30
Methode 1

Storage cabinet with drying function
for flexible endoscopes/
Lagerungsschrank mit Trocknungsfunktion
für flexible Endoskope

Cabinet with article no.: /
Schränke mit Artikel Nr.:

#015120-#015125 (ENDODRY)

#015126-#015131 (ENDODRY one-click)

#015760-#015765 (endoSTORE BHT)

#015906-#015911 (endoSTORE one-click)

REV	DESCRIPTION	DATE	NAME	CHECKED
b	Adjustment of the temperatures in technical data	11.09.18	Klein	Stebner
a	typing mistakes and packaging adjusted	17.05.18	Klein	Stebner

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:10

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

TITLE:

Installation requirements - horizontal storage cabinet

MATERIAL:

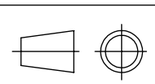
WEIGHT: g

ESCAD MEDICAL

DWG NO. 30 00 20 001

A3
en
1/11

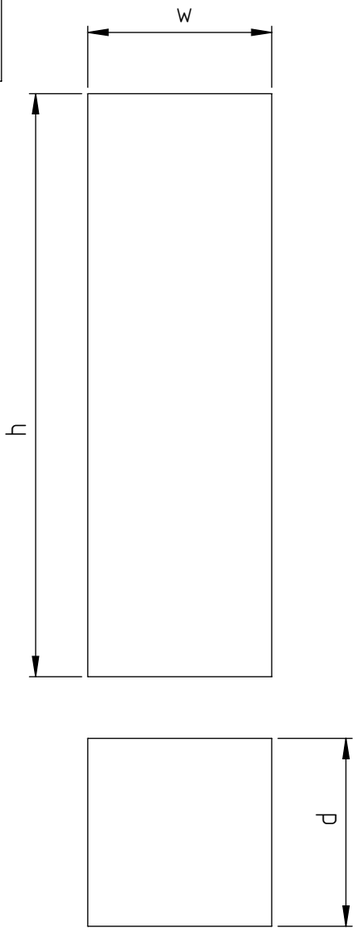
ISO 128-30
Methode 1



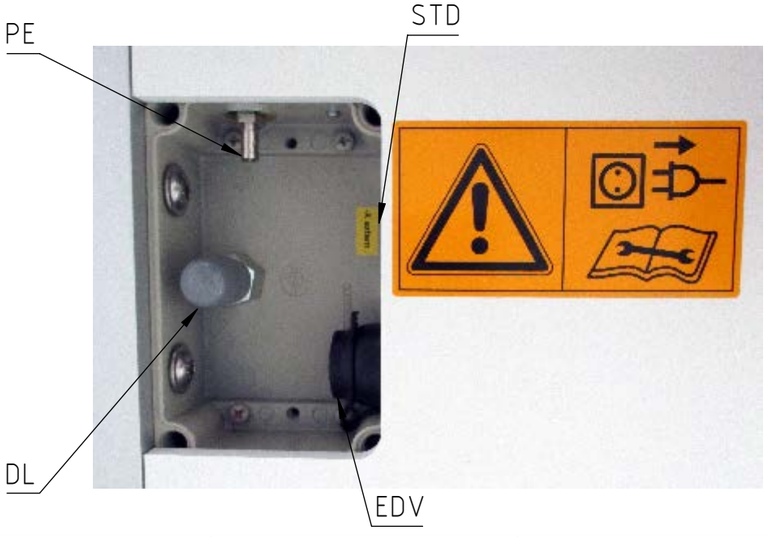
Technical specifications /
Technische Daten:

Dimension cabinet/
Außenmaße:
w: 600 mm
h: 1900mm
d: 540mm
Weight/*Gewicht*: 145 kg

Dimension standard packaging /
Maße für Standardverpackung:
w: 800 mm
h: 2200 mm
d: 1200 mm
Weight/*Gewicht*: 220 kg



min. permitted floor load / *minimale Nutzlast Boden:* 4,4 kN/m²
level and stable surface necessary / *ebener und stabiler Untergrund erforderlich*



Definition of the locally connections / Definition der bauseitigen Anschlüsse

Mark / *Bezeichnung*	Connection / Anschluss	Comment / Bemerkung	
STD	power socket / *Netzsteckdose*	100-240VAC, 50/60Hz,16A, max. 75W, <1kWh/d	
EDV	network connection / *Netzwerkanschluss* (RJ45)	TCP-Ports: 80; 20; 21; 445; 1433; 1034; 37223 UDP-Ports: 80; 1900 LM- authentication for network logons	
DL	compressed air supply / Druckluftanschluss (DIN 13260-2,Profil Nr.2 or open end/hose barb DN6mm (1/4"))	#015120-#015125, #015760-#015765:	#015126-#015131, #015906-#015911:
		2-10 bar (29-145 psi) 3.5 CFM (ANR) resp. 0.6 CFM @ 72.5 psi / 100l/min (ANR), bzw. 17 l/min @ 5bar Ø2.2CFM (ANR) / Ø63 l/min (ANR)	5-10 bar (72,5-145 psi) 7 CFM (ANR) resp. 1.2 CFM @ 72.5 psi / 200 l/min (ANR) bzw. 33 l/min @ 5 bar Ø3.3CFM (ANR) / Ø94 l/min (ANR)
		ISO 8573-1:2010 min. class 1.4.1 on site supply/*bauseitige Leitung* min. DN10 connection tube/*Anschlussschlauch* DN6 max. L=2000	
PE	potential earth / *Potentialausgleich* (DIN 42801 6mm Plug)	4mm²	

Notice / *Hinweis*	Comment / *Bemerkung*
Electrical disconnection / *Trennung vom Stromnetz*	The power cable of the cabinet serves as a separation device from the power supply. If this can not be achieved properly, a suitable device must be installed on the premise (e.g. central emergency stop): / *Das Netzkabel des Schrankes dient als Trenneinrichtung vom Stromnetz. Ist dieses nicht einwandfrei zu erreichen, muss hausseitig eine geeignete Einrichtung installiert werden (bspw. zetraler Not-Halt).*
Electrical connections / *Elektroanschlüsse*	Electrical connections must be installed in accordance with applicable standards. / *Elektroanschlüsse sind nach geltenden Vorschriften (z.B. VDE) zu installieren.*
Reference / *Bezug*	All dimensions refer to the finished floor and the finished wall. / *Alle Maßangaben beziehen sich auf Fertigfußboden und Fertigwand.*

Technical Data / *Technische Daten*	
Working Condition / *Betriebsbedingung*	Temperature/ *Temperatur:* 50 °F-95 °F / 10 °C-35 °C Humidity / *Luftfeuchtigkeit:* 10 %rel.-75 %rel.
Noise level/ *Geräuschpegel*	55dB(A) +-5dB(A) frontal 1m distance from a single cabinet in quite environment / *frontal 1m Abstand, einzelner Schrank, in ruhiger Umgebung*
Waste heat/ *Abwärme*	max. 256Btu/h /max.75W

REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES.
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT: | SCALE: | STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

TITLE:
Installation requirements - horizontal storage cabinet

MATERIAL:

WEIGHT: g

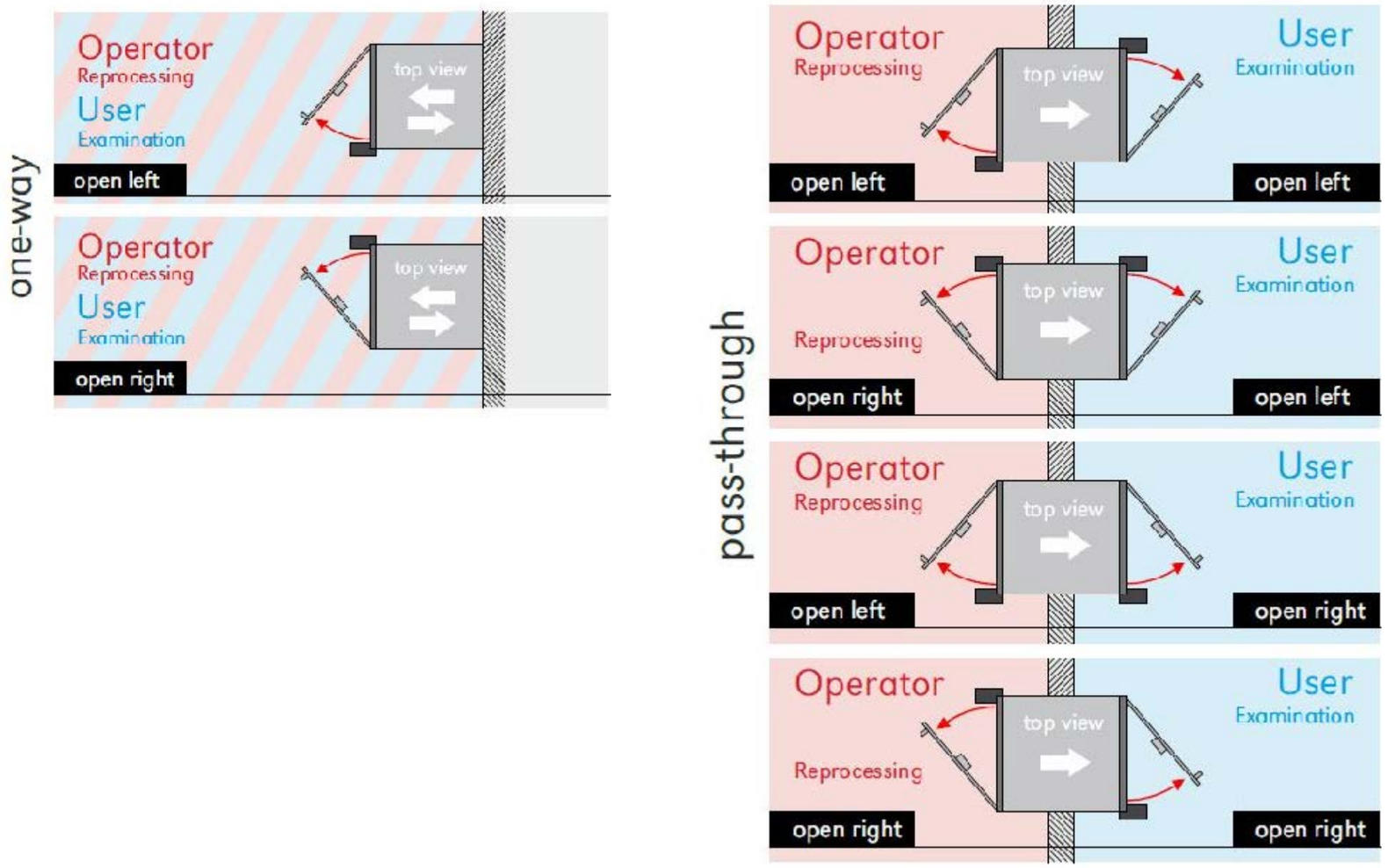
ESCAD MEDICAL

DWG NO. 30 00 20 001

A3
en
2/11

ISO 128-30
Methode 1

Overview variants / *Varianten Übersicht*



REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES. DIN ISO 2768-1 class: m DIN ISO 2768-2 class: K	FINISH:	DO NOT SCALE DRAWING	
		DOCUMENT:	SCALE: / STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

MATERIAL:

WEIGHT: g

ESCAD MEDICAL

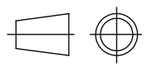
TITLE:

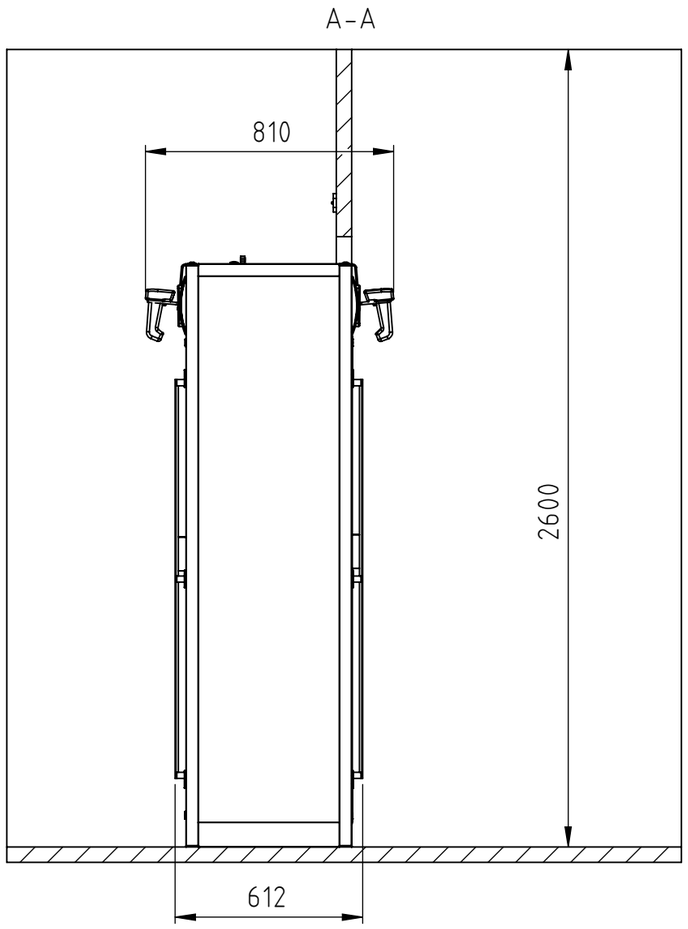
Installation requirements – horizontal storage cabinet

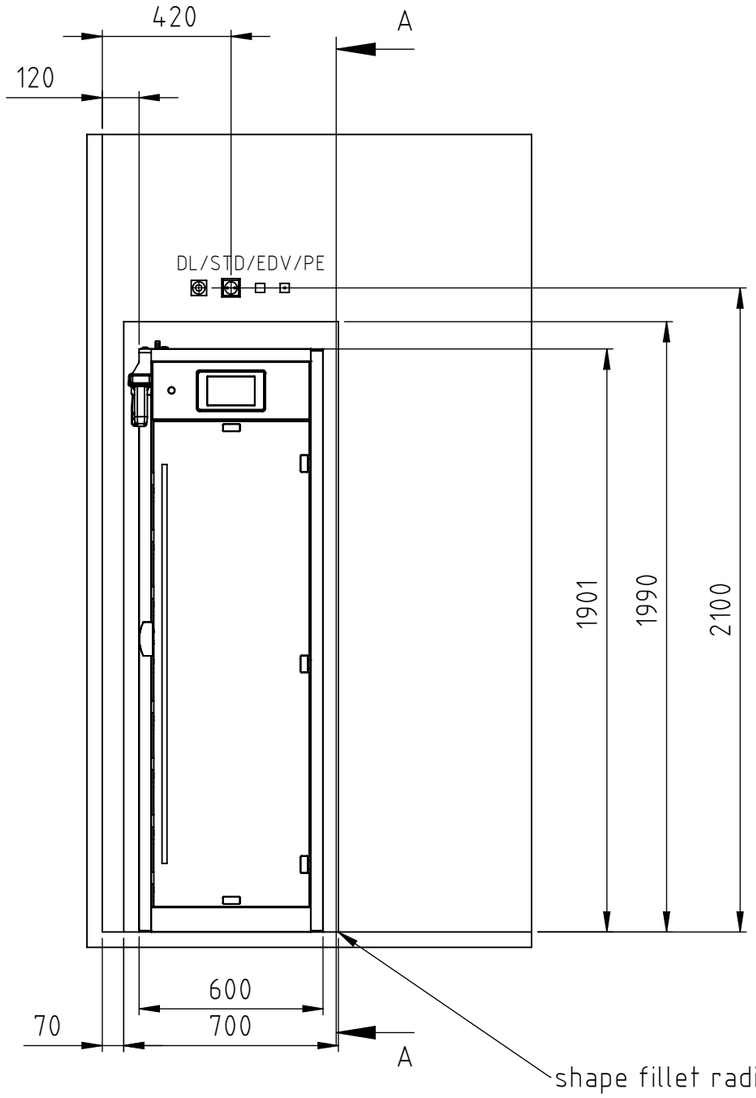
DWG NO. 30 00 20 001

A3 | en | 3/11

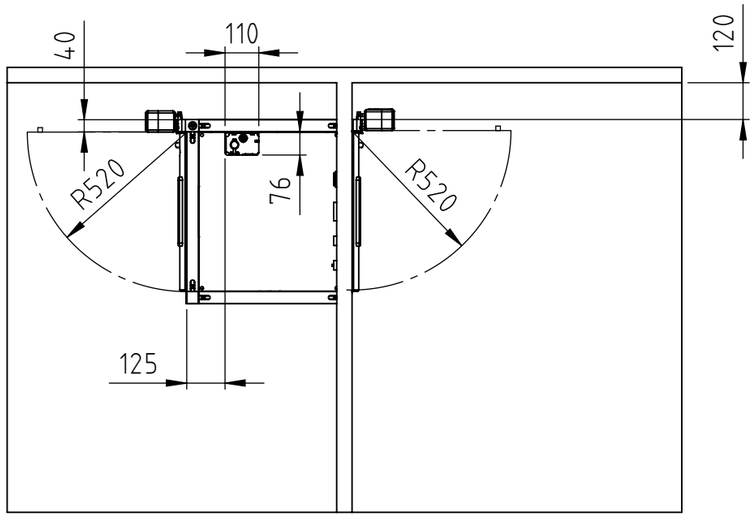
ISO 128-30
Methode 1







shape fillet radius max. 50mm
Hohlkehlen Radius max. 50mm



REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES.
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:20

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

MATERIAL:

WEIGHT: g

ESCAD MEDICAL

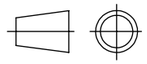
TITLE:

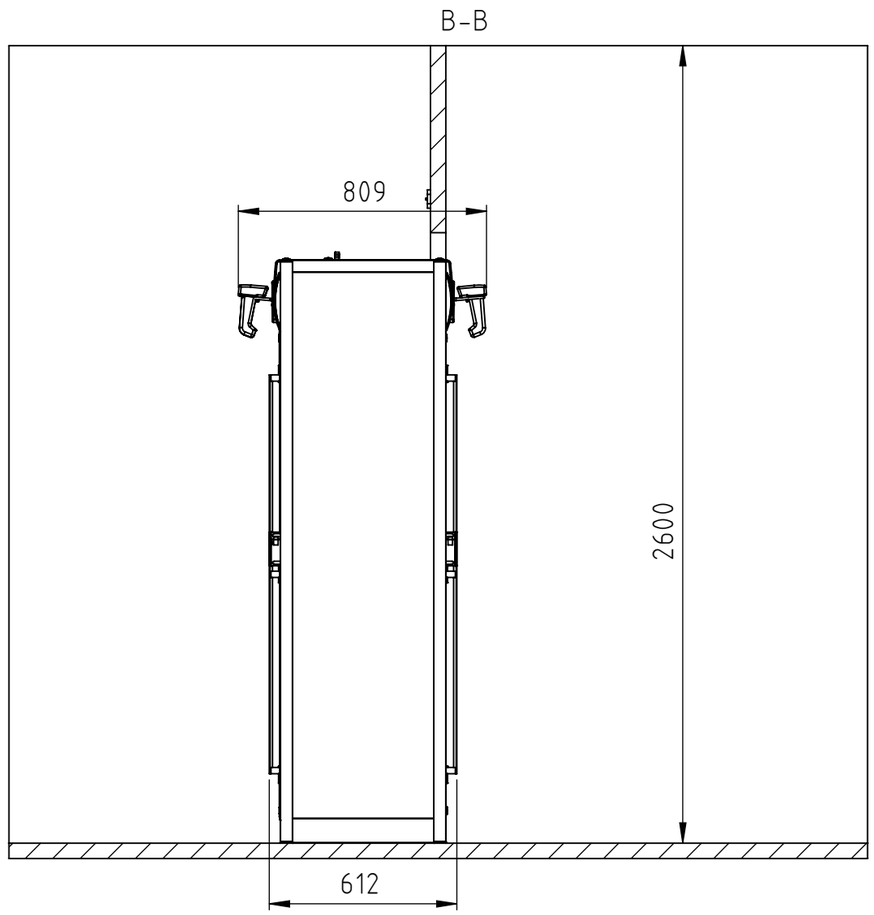
Installation requirements – horizontal storage cabinet

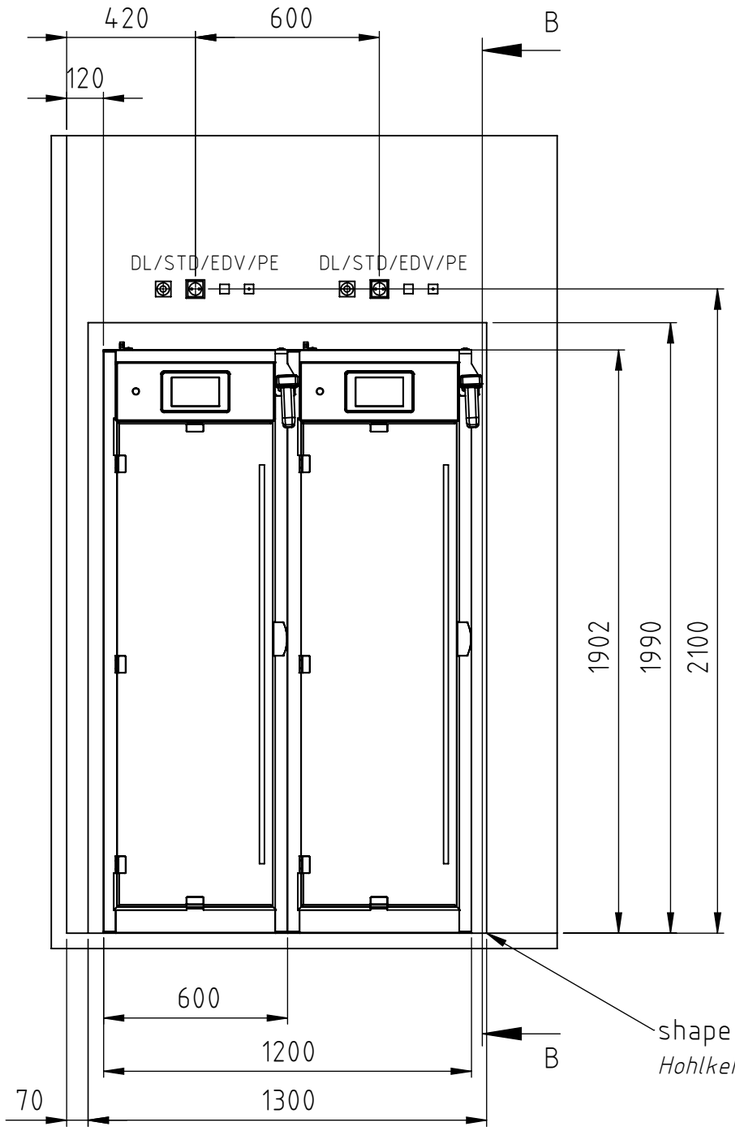
DWG NO. 30 00 20 001

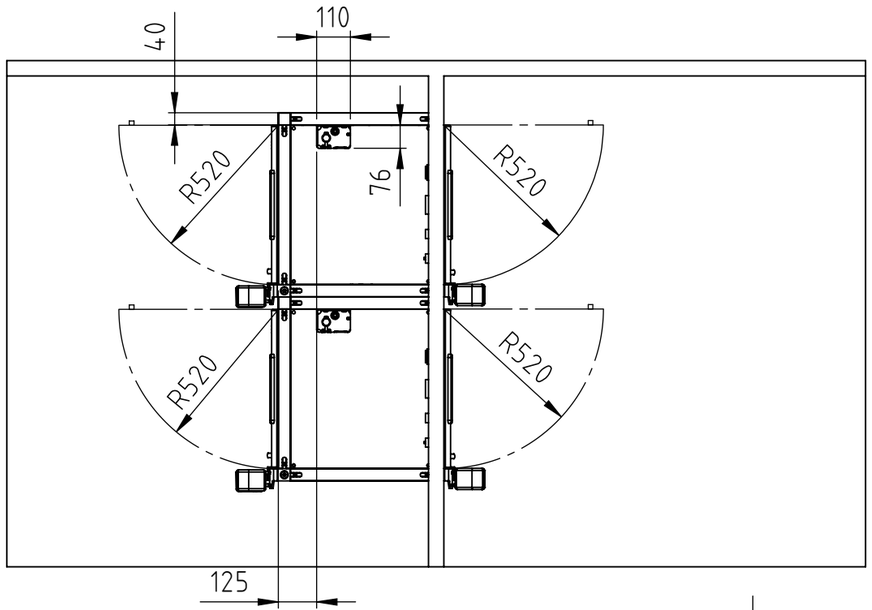
A3
en
4/11

ISO 128-30
Methode 1









Double wing door not possible.
Scanner module collides.
Flügeltüren nicht möglich.
Scanner Module kollidiert.

REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:20

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

TITLE:

Installation requirements – horizontal storage cabinet

MATERIAL:

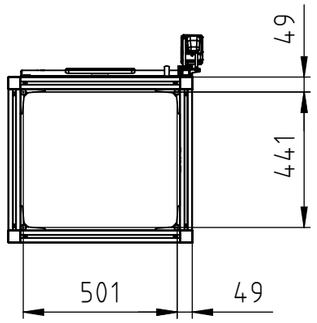
WEIGHT: g

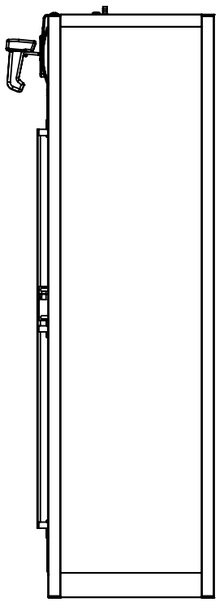
ESCAD MEDICAL

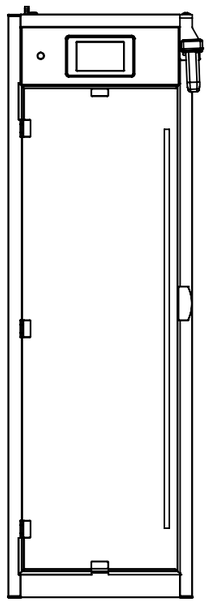
DWG NO. 30 00 20 001

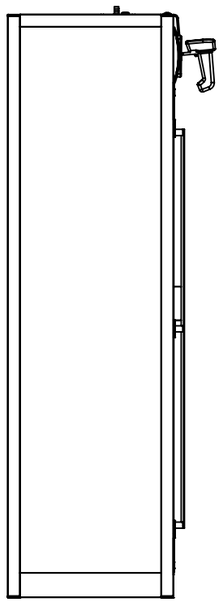
A3
en
5/11

ISO 128-30
Methode 1

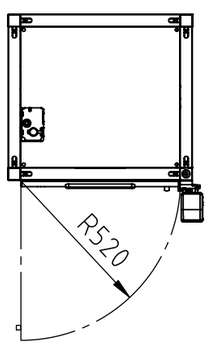








#015120 Endodry os OL
#015126 Endodry one-click os OL
#015760 endoSTORE BHT os OL
#015906 endoSTORE one-click os OL



REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:20

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

TITLE:

Installation requirements – horizontal storage cabinet

MATERIAL:

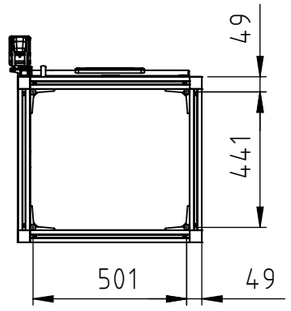
WEIGHT: g

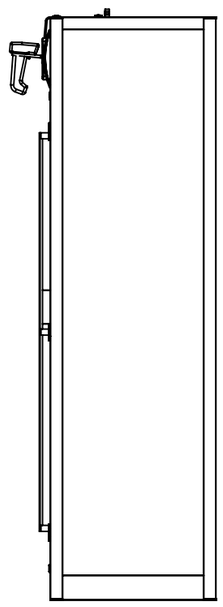
ESCAD MEDICAL

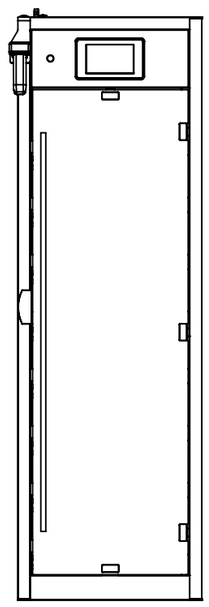
DWG NO. 30 00 20 001

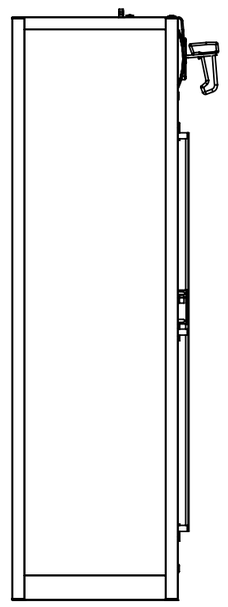
A3
en
6/11

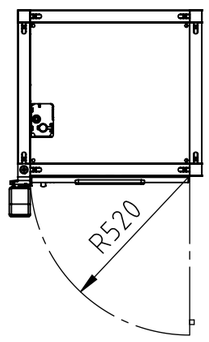
ISO 128-30
Methode 1











#015121 Endodry os OR
#015127 Endodry one-click os OR
#015761 endoSTORE BHT os OR
#015907 endoSTORE one-click os OR

REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES. DIN ISO 2768-1 class: m DIN ISO 2768-2 class: K	FINISH:	DO NOT SCALE DRAWING	
		DOCUMENT:	SCALE: 1:20 / STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		
MATERIAL:		
WEIGHT: g		

TITLE:

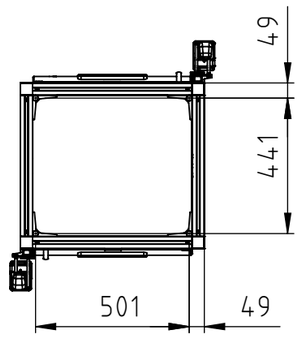
Installation requirements – horizontal storage cabinet

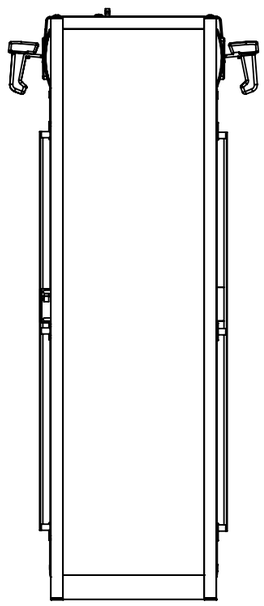
ESCAD MEDICAL

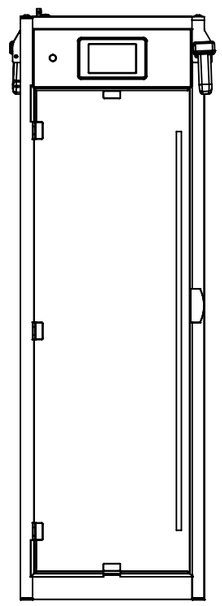
DWG NO. 30 00 20 001

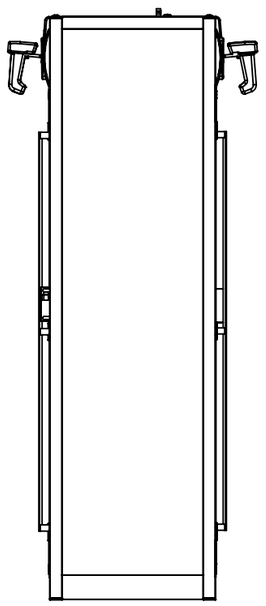
A3 | en | 7/11

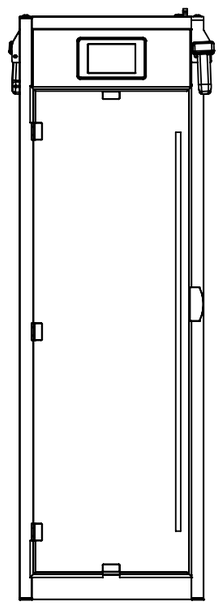
ISO 128-30
Methode 1

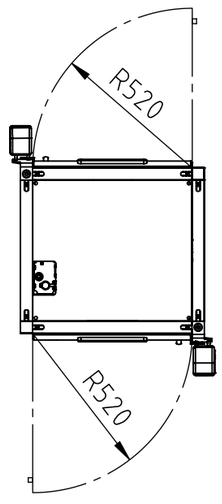












#015122 Endodry pt OL/UL
#015128 Endodry one-click pt OL/UL
#015762 endoSTORE BHT pt OL/UL
#015908 endoSTORE one-click pt OL/UL

REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES.
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:20

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

MATERIAL:

WEIGHT: g

ESCAD MEDICAL

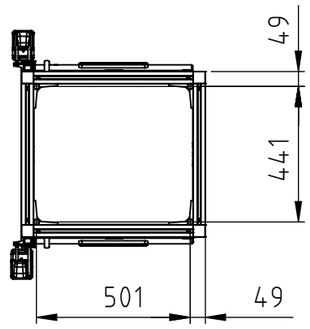
TITLE:

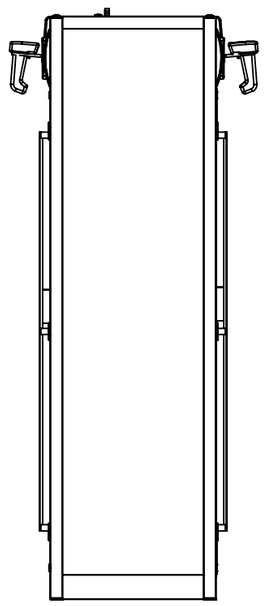
Installation requirements – horizontal storage cabinet

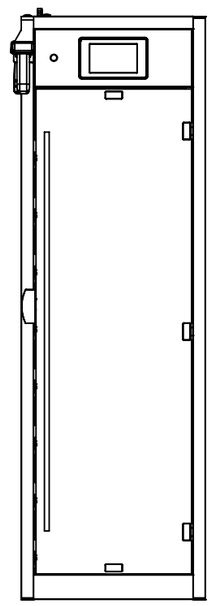
DWG NO. 30 00 20 001

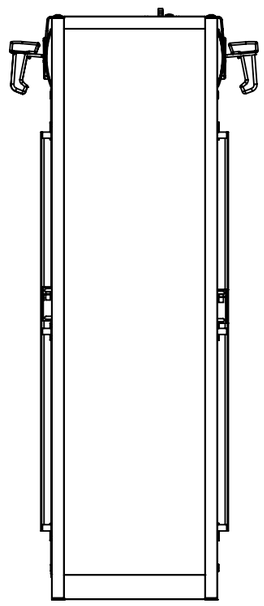
A3
en
8/11

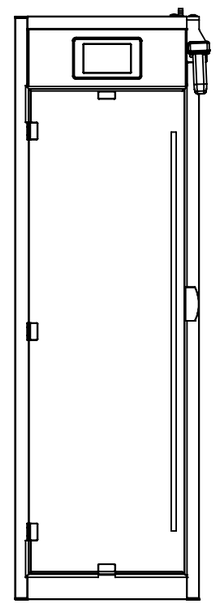
ISO 128-30
Methode 1

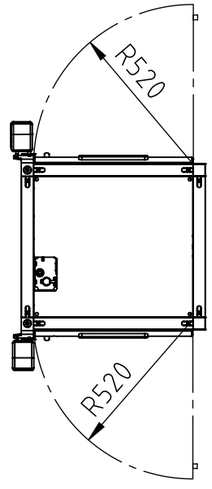












#015123 Endodry pt OR/UL
#015129 Endodry one-click pt OR/UL
#015763 endoSTORE BHT pt OR/UL
#015909 endoSTORE one-click pt OR/UL

REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES. DIN ISO 2768-1 class: m DIN ISO 2768-2 class: K	FINISH:	DO NOT SCALE DRAWING	
		DOCUMENT:	SCALE: 1:20 / STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

TITLE: Installation requirements – horizontal storage cabinet

MATERIAL:

WEIGHT: g

ESCAD MEDICAL

DWG NO. 30 00 20 001

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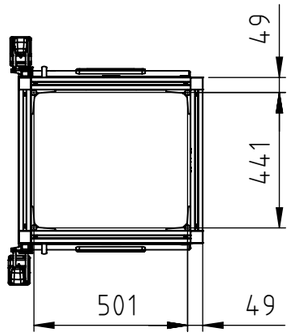
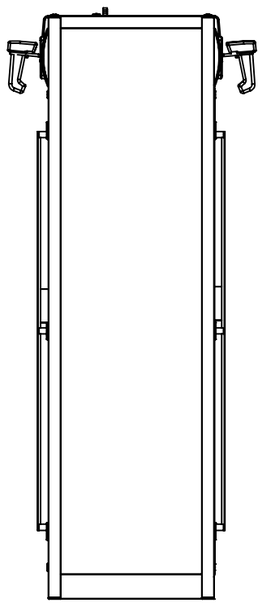
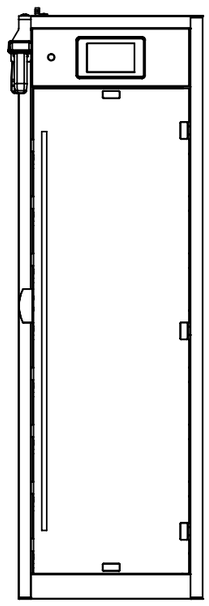
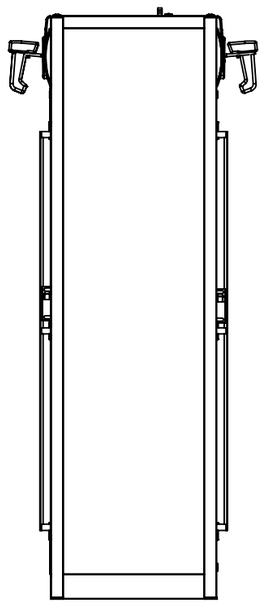
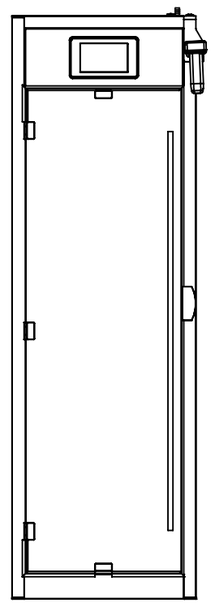
ISO 128-30
Methode 1

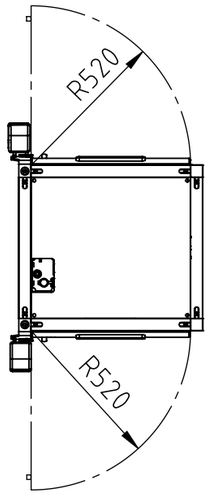












#015124 Endodry pt OL/UR
#015130 Endodry one-click pt OL/UR
#015764 endoSTORE BHT pt OL/UR
#015910 endoSTORE one-click pt OL/UR

REV	DESCRIPTION	DATE	NAME	CHECKED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES.
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:20

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

MATERIAL:

WEIGHT: g

ESCAD MEDICAL

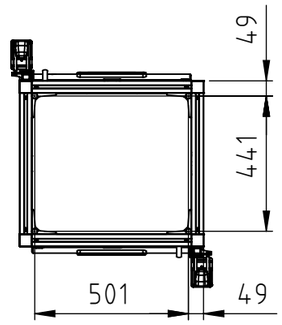
TITLE:

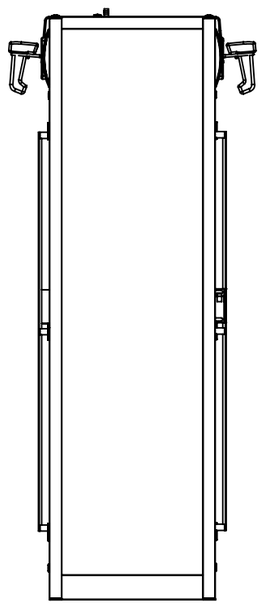
Installation requirements – horizontal storage cabinet

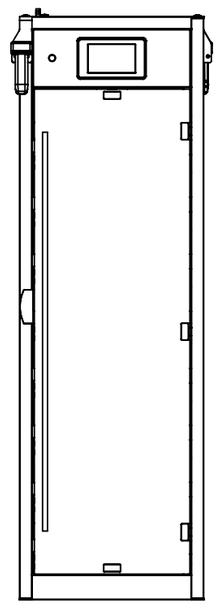
DWG NO. 30 00 20 001

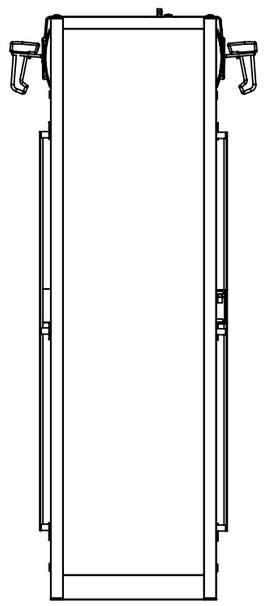
A3
en
10/11

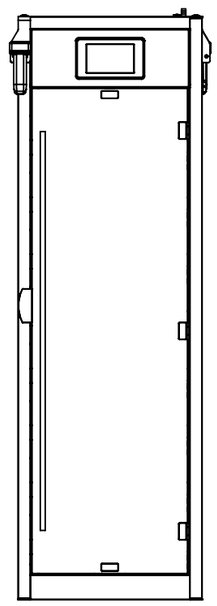
ISO 128-30
Methode 1

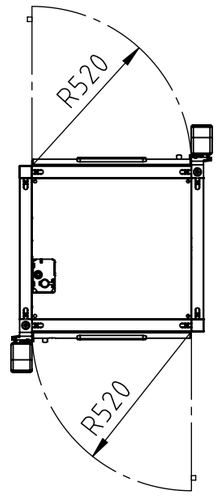












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#015131 Endodry one-click pt OR/UR
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REV	DESCRIPTION	DATE	NAME	CHECKED

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TOLERANCES.
DIN ISO 2768-1 class: m
DIN ISO 2768-2 class: K

FINISH:

DO NOT SCALE DRAWING

DOCUMENT:

SCALE: 1:20

STATUS:

	NAME	DATE
DRAWN	Klein	09.08.17
CHECKED	Stebner	11.08.17
QUALITY CONTROL		

MATERIAL:

WEIGHT: g

ESCAD MEDICAL

TITLE:

Installation requirements – horizontal storage cabinet

DWG NO. 30 00 20 001

A3
en
11/11

ENDODRY™

Storage & Drying Sytem

CUSTOMER REQUIREMENTS

NORTH AMERICA

MEDIVATORS
A Cantel Medical Company

ADVANTAGE PLUS™
is a trademark of Medivators Inc.

DSD EDGE™
is a trademark of Medivators Inc.

ENDODRY™
is a trademark of Medivators Inc.

All other company or product names referenced in this document are trademarks of their respective owner.

50098-678-EN Rev E

SITE REQUIREMENTS

This purpose of this document is to provide the facility with requirements to ensure correct installation and subsequent proper performance of the ENDODRY™ Storage and Drying System.

READ THE ENTIRE DOCUMENT.

APPLICABLE DOCUMENTS

- ENDODRY Storage and Drying System User Manual.

Any deviation from these specifications may cause operational issues that would not be covered by the Warranty.

BY SIGNING BELOW CUSTOMER ACKNOWLEDGES THAT:

1. Customer reviewed these Site Requirements for the ENDODRY™ Storage and Drying System as indicated in this document.
2. The customer assumes complete responsibility for meeting the specifications and requirements set forth in the Site Requirements documentation to ensure proper installation and performance of the ENDODRY Storage and Drying System. Failure of the customer to comply with these Site Requirements and any deviation from the specifications set forth herein may compromise the functionality of the system, and/or may cause operational issues which will not be covered by the Cantel Medical warranty, and are hereby disclaimed by Cantel Medical.
3. The customer assumes complete responsibility for meeting the specifications and requirements set forth in the Site Requirements documentation by the agreed upon installation date between the Customer and Cantel Medical. If the Cantel Medical installation team encounters any delays due to site requirements not meeting specifications and requirements, the Customer will be charged Medivators current rates for stand-by fees, until the site requirements are met and installation activity resumes; or, if it is determined that the delay results in rescheduling the installation to a later date, the Customer will be charged for all expenses at current Medivators rates (flights, lodging, and car rental, if applicable), and travel and labor time related to the return installation dispatch.
4. If installation is canceled or moved 48 hours prior to the agreed upon installation date, no fee will be charged.
5. For customers who request or accept Medivators space planning suggestions for the site prior to installation (“Space Planning Services”), Customer agrees that the Disclaimer, indicated in this document on Page 9, will apply to such Space Planning Services.

Customer Representative				Title	
Signature		Date		Email	

AIR SUPPLY

1. Quality: ISO 8573-1:2010 class 1.2.1
   - Particle Size: Incoming air filtered down to <1 micron in size.
   - Moisture Content: Pressure dew point (PDP) of -40°C or better required and no liquid water.
   - Oil Content: < 0.01mg of oil per cubic meter of compressed air (liquid, aerosol or vapor oil).
2. Pressure: The below pressures are required at the point of cabinet connection. Facility should consult with their Maintenance Department or their qualified air vendor to identify potential issues with the air supply.
   - ENDODRY™ Cabinet for ADVANTAGE PLUS™ Endoscope Reprocessor: 58-145 psi (4-10 bar).
   - ENDODRY Cabinet for DSD EDGE™ Automated Endoscope Reprocessor: 72-145 psi (5-10 bar).
3. Volume: The below volumes are required at the point of cabinet connection.
   - ADVANTAGE PLUS Endoscope Reprocessor/ENDODRY Cabinet: Minimum requirement of 4.2 scfm (120 l/min ANR) per cabinet.
   - DSD EDGE Automated Endoscope Reprocessor/ENDODRY Cabinet: Minimum requirement of 7 scfm (200 l/min ANR) per cabinet.
4. Flexible Air Hose: A 5 foot (1.5 Meter) line is included with each cabinet.
   - One end will be pre-configured to connect to ENDODRY™ Drying Cabinet.
   - Open end will be ¼" or 6mm inner diameter and it is the responsibility of the facility to make that connection to their air supply line.

The compressors listed below are suggestions that the facility can purchase directly from either the compressor manufacturer or authorized dealer. Medivators is not responsible for air compressor warranty, service and maintenance.

ADVANTAGE HOOKUPS		
# of Cabinets	BeaconMedaes *(Requires Additional Dryer)*	Powerex *(w/ Dryer)*
1	LES03-145T-RD-xxx	SES0308TM**
2	LES05-145T-RD-xxx	SES05058TM**
3	LES07-145T-RD-xxx	LSE1504
4	LES07-145T-RD-xxx	LSE1504
5	LES15-145RD	LSE1504

DSD HOOKUPS		
# of Cabinets	BeaconMedaes *(Requires Additional Dryer)*	Powerex *(w/ Dryer)*
1	LES05-145T-RD-xxx	SES0508TM**
2	LES10-145RD	LSE1504
3	LES15-145RD	LSE1504
4	LES20-145RD	LSE2005
5	LES20-145RD	LSE2005

ELECTRICAL SUPPLY

- 100-240 VAC ± 10%, single phase, 50/60 Hz, 15 amp circuit (120v), 10 amp circuit (230v).
- Power input: 75W
- A NEMA 5-15 power cord for the North America market and a CEE 7 power cord for the European market is included with the ENDODRY™ Storage and Drying System. The cord is approximately 6 feet (1.8 meters) in length.
- A GFI/RCD protected outlet located on the wall above the ENDODRY Storage and Drying System, see Floor & Wall Section.
- Medivators equipment must be on dedicated circuits.

NETWORKING

- The ENDODRY Storage and Drying System is a networkable piece of equipment and has the capabilities to communicate to other Medivators technologies via a LAN interface (RJ45, 10/100 Mbit).
- A 6.5 foot (2 meter) cable is included with the cabinet.
- A RJ45 wall mounted network jack located on the wall above the ENDODRY Storage and Drying System, see Floor & Wall section.

DIMENSIONS

Shipping Dimensions

- Crate Dimensions: H84”x W47”x D31”
- Crate Weight: 583 lbs.

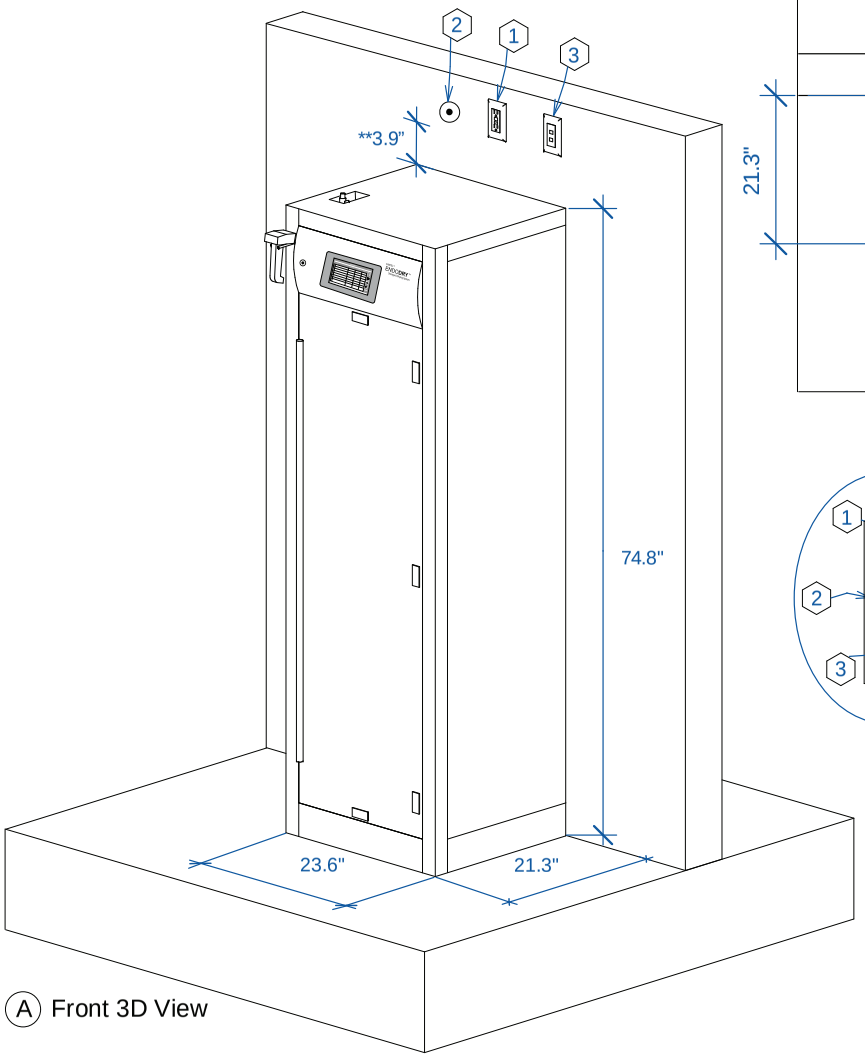
Reprocessor Dimensions

- Dimensions: H74.8” X W23.6” X D21.3”
- Weight: 375 lbs (170 kg)

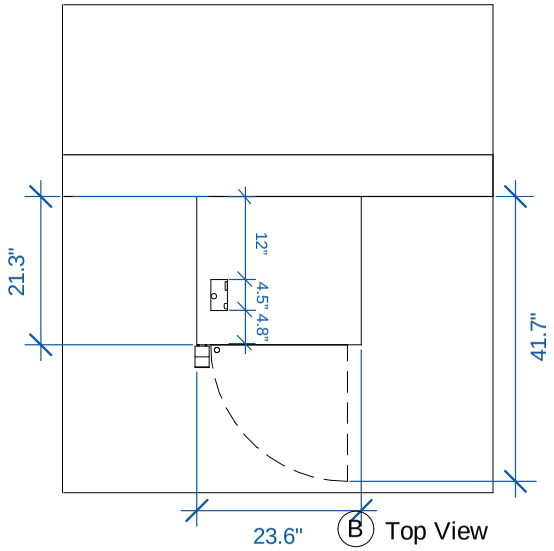
FLOOR & WALL

- The floor must be level.
- For optimal user-safety and operation, it is recommended that the ENDODRY Storage and Drying System always be placed directly on the floor, and not on an elevated platform.
- The back of the one-sided ENDODRY Storage and Drying System will be placed flush against the wall. All electrical, network and air connections must be placed a minimum of 78.7 inches (200 cm) off of the floor above the cabinet.
- The two-sided ENDODRY Storage and Drying System is designed to fit into an opening in the wall. The rough opening for a single unit is H75.2” X W24” (191cm x 61cm). All electrical, network and air connections must be placed a minimum of 78.7 inches (200 cm) off of the floor above the cabinet. The electrical, network and air connections must be located on the loading side of the ENDODRY Storage and Drying System.

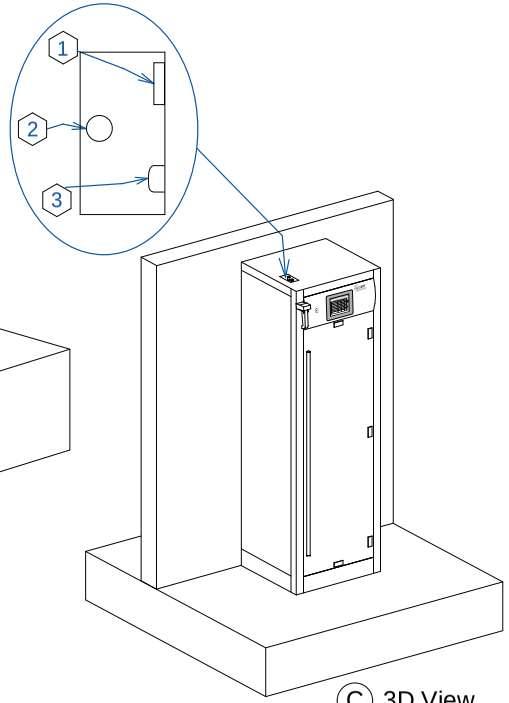
One-Sided Version



A Front 3D View



B Top View



C 3D View

CANTEL

ENDODRY™

Storage and Drying System

1. Electrical Connection
2. Air Connection
3. Network Connection

**Minimum facility wall connections height is 78.7" from floor.

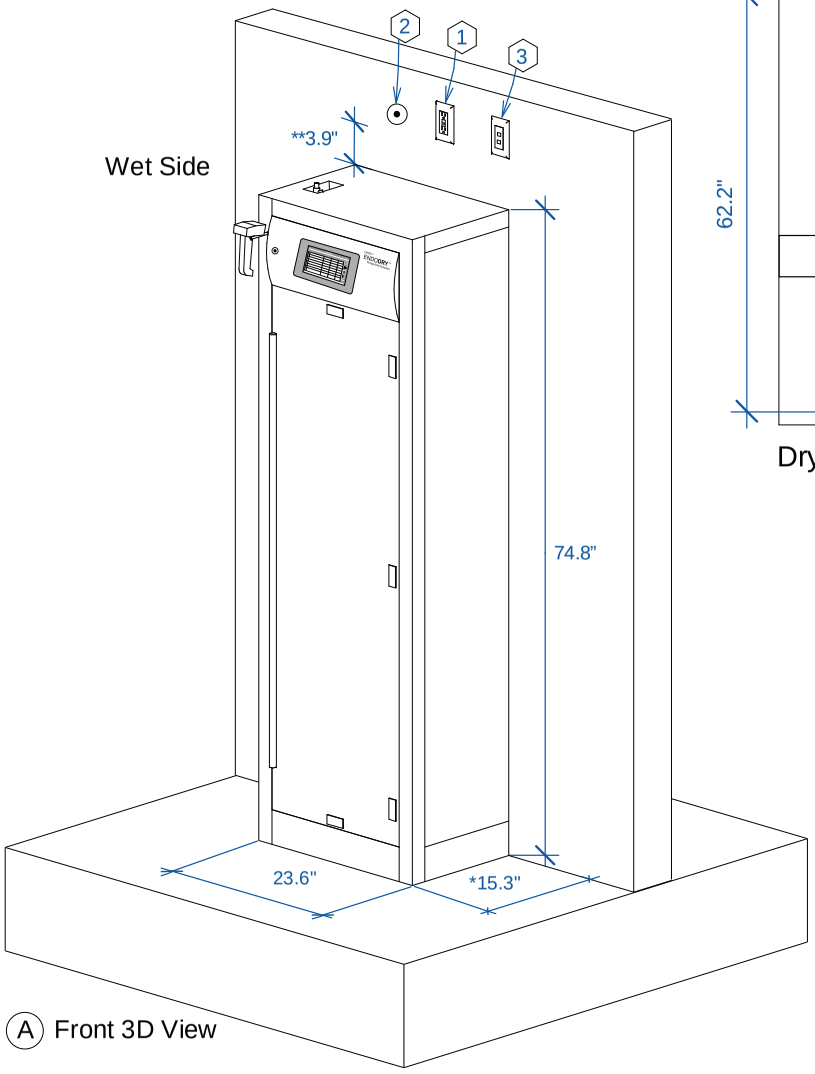
Options for Doors

Open Left - OL
Open Right- OR

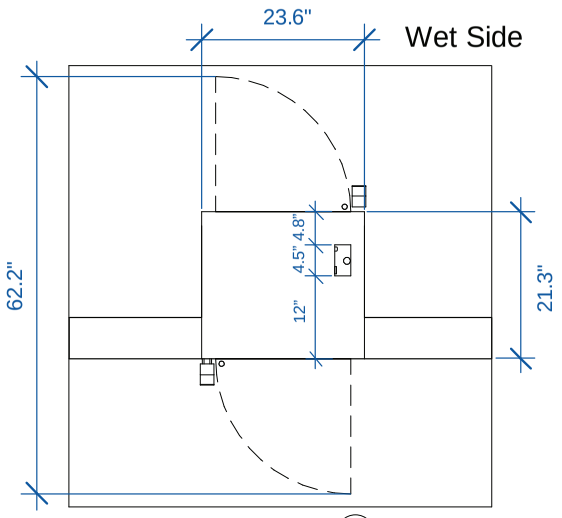
For clarification and/or questions please contact Technical Support at 1.800.444.4729.

www.endoinfectionprevention.com to download the Revit file.

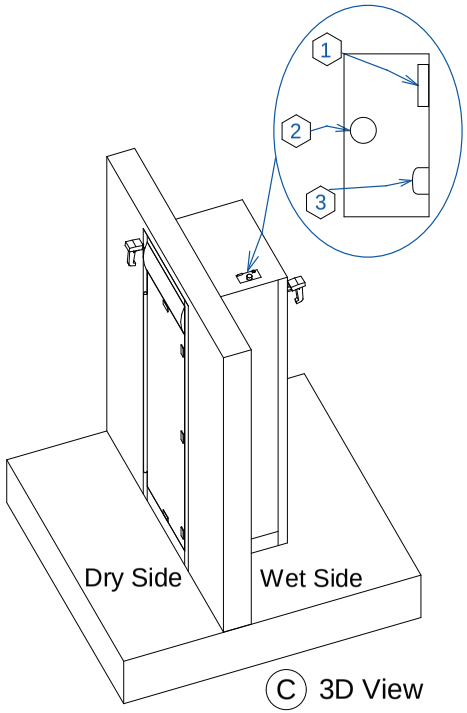
Two-Sided Version (Pass-Thru)



A Front 3D View



B Top View



C 3D View

CANTEL

ENDODRY™

Storage and Drying System

1. Electrical Connection
2. Air Connection
3. Network Connection

*Measurement using a 6" wall.

**Minimum facility wall connections height is 78.7" from floor.

Options for Doors

Open Left/Open Left - OLUL
Open Right/Open Left - ORUL
Open Left/Open Right - OLUR
Open Right/Open Right - ORUR

For clarification and/or questions please contact Technical Support at 1.800.444.4729.

www.endoinfectionprevention.com to download the Revit file.

SPACE-PLANNING SERVICES

For customers who request or accept Medivators space planning suggestions for the site prior to installation ("Space Planning Services"), Customer agrees that the following Disclaimer will apply to such Space Planning Services:

CUSTOMER ACKNOWLEGES AND ACCEPTS THAT SPACE PLANNING SERVICES ARE OFFERED AND PROVIDED "AS IS" WITH NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, OF ANY KIND WHATSOEVER, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR REPRESENTATIONS AS TO THE ADEQUACY OF ANY DESIGN, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THAT ANY OF THE SERVICES WILL MEET CUSTOMER'S NEEDS OR REQUIREMENTS OR BE CAPABLE OF IMPLEMENTATION. IN NO EVENT SHALL MEDIVATORS BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR LOSS OF PROFITS, LOSS OF USE, OR ANY DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND, WHETHER OR NOT A PARTY WAS, IS, OR SHOULD BE AWARE OF SUCH LOSS OR DAMAGES. CUSTOMER AGREES THAT IT WILL RELY ON, USE AND OR OTHERWISE EMPLOY ARCHITECTS, ENGINEERS, CONSTRUCTION PROFESSIONALS AND OTHER VENDORS OR SERVICE PROVIDERS (COLLECTIVELY, "PROJECT PROFESSIONALS") REGARDING THE FEASIBILITY OR IMPLEMENTATION OF ANYSPACE PLANNING SERVICES PROVIDED BY MEDIVATORS. By accepting the Space Planning Services, (i) Customer agrees to hold Medivators and its affiliates entirely free from any liability, including financial responsibility, for all claims, losses, damages, suits, actions, costs, liabilities, or expenses incurred by Customer or its agents or affiliates as a result of any design defect, any requirement of corrective or other action or its use, reliance on, modification or implementation of any of the Space Planning Services; (ii) Customer acknowledges that Medivators is not a licensed architect or engineer or otherwise in the business of construction or space design and Customer accepts the risks involved in using such Space Planning Services from Medivators; and (iii) Customer agrees to communicate to the Project Professionals the content of all the Space Planning Services including, without limitation, all designs and plans, specifications and attachments, and to have such Project Professionals check, review, verify and approve such content prior to incorporating, using or otherwise implementing any Space Planning Service.

ENDODRY™ STORAGE AND DRYING SYSTEM PRE-SITE REQUIREMENTS CHECKLIST

INITIAL AND SIGN AT THE TIME OF PRE-SITE INSPECTION

Customer Site Requirements Criteria	Initials
ENDODRY™ Cabinet for ADVANTAGE PLUS™ Endoscope Reprocessor provides air supply of 58-145 psi (4-10 bar). ENDODRY Cabinet for DSD EDGE™ Automated Endoscope Reprocessor provides air supply of 72-145 psi (5-10 bar).	
Air supply provides a flow rate of 4.2 scfm (120 l/min ANR) for the Advantage and 7 scfm (200 l/min ANR) for the DSD.	
Air supply maximum particle size is <1 micron, maximum dew point is -40°C, maximum oil content is 0.01 mg/m3.	
Air Supply plumbed to the wall a minimum of 78.7 inches (200 cm) off of the floor above the cabinet.	
GFI/RCD protected outlet located on the wall a minimum of 78.7 inches (200 cm) off of the floor above the cabinet.	
RJ45 wall mounted network jack located on the wall a minimum of 78.7 inches (200 cm) off of the floor above the cabinet (ENDODRY™ Cabinet for ADVANTAGE PLUS™ Endoscope Reprocessor only).	
Installation site has a level floor.	
Installation site accommodates the dimensions of H74.8” x W23.6” x D21.3” (190cm x 60cm x 54cm)	

Customer Site					
Customer Representative				Title	
Signature		Date		Email	

Serial #	
Serial #	
Serial #	
Serial #	
Serial #	
Serial #	

MEDIVATORS
A Cantel Medical Company

Medivators Inc.
14605 28th Avenue North
Minneapolis, MN 55447 USA
Toll Free: +1.800.444.4729

Medivators BV
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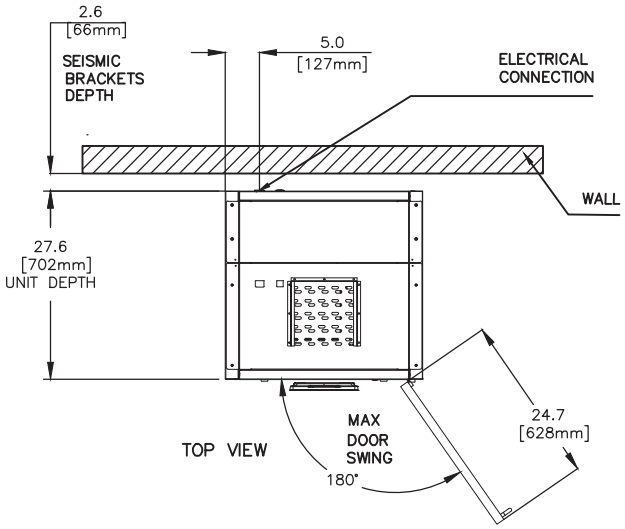
6422PC Heerlen
The Netherlands
Tel: +31.45.5.471.471

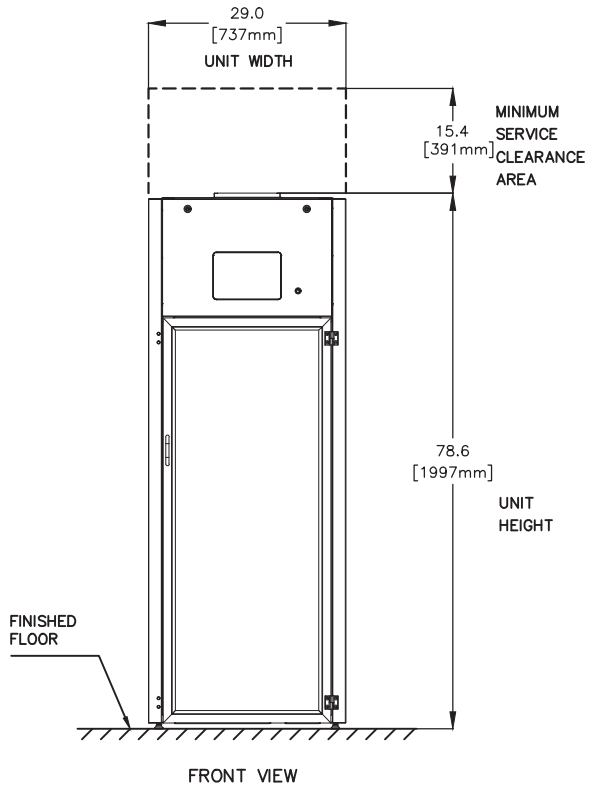
ESCAD Medical GmbH
Zur Ohmdwiesen 5
88633 Heiligenberg
Germany
Tel: +49.7554.9999.500
Fax: +49.7554.9999.558

Cantel Medical Asia/Pacific Pte. Ltd.
1A International Business Park
#05-01 Singapore 609933
Tel: +65.6227.9698

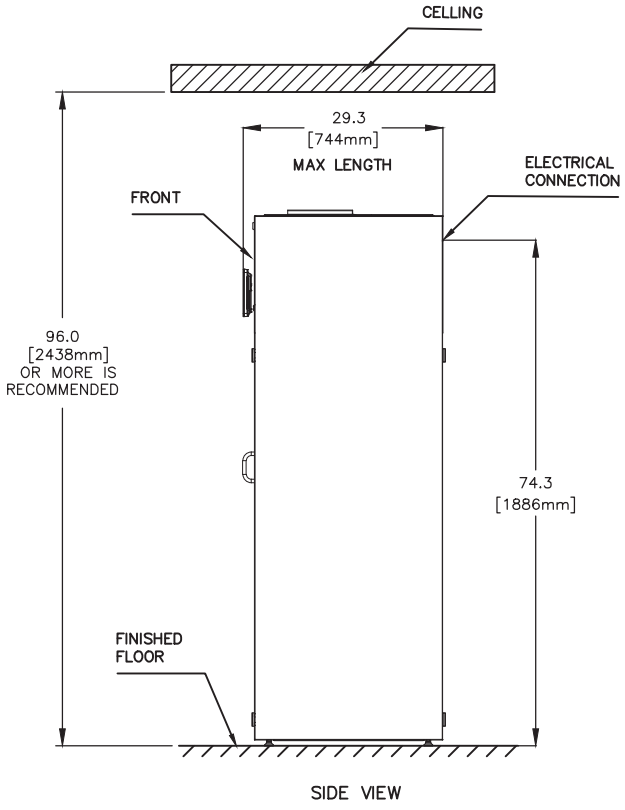
www.medivators.com

29" DRYING CABINET
TYPICAL INSTALLATION
(FLUSH WALL)





FRONT VIEW



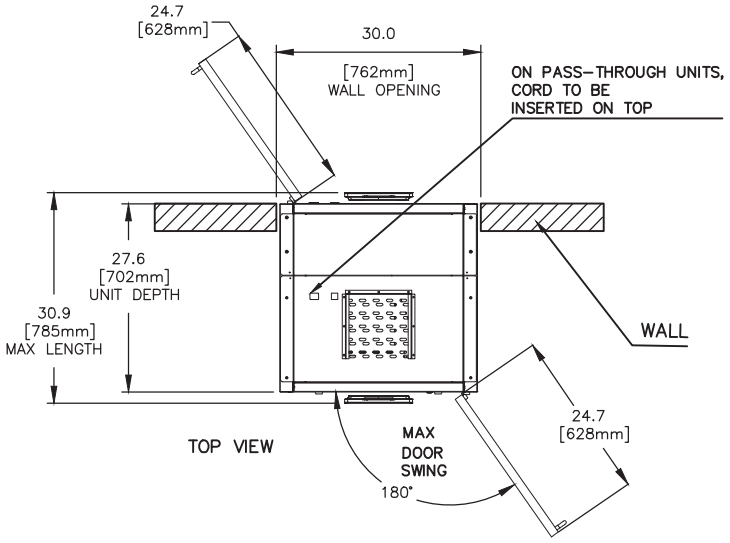
SIDE VIEW

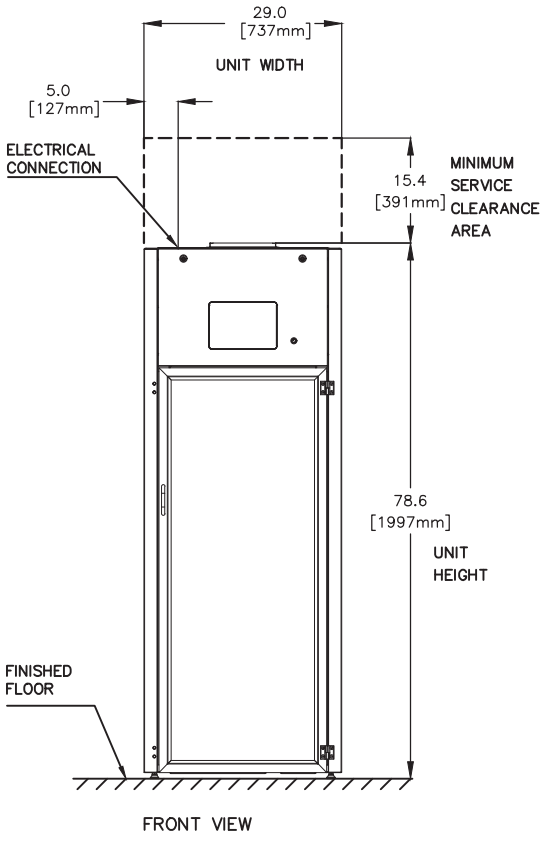
STERIS Corporation

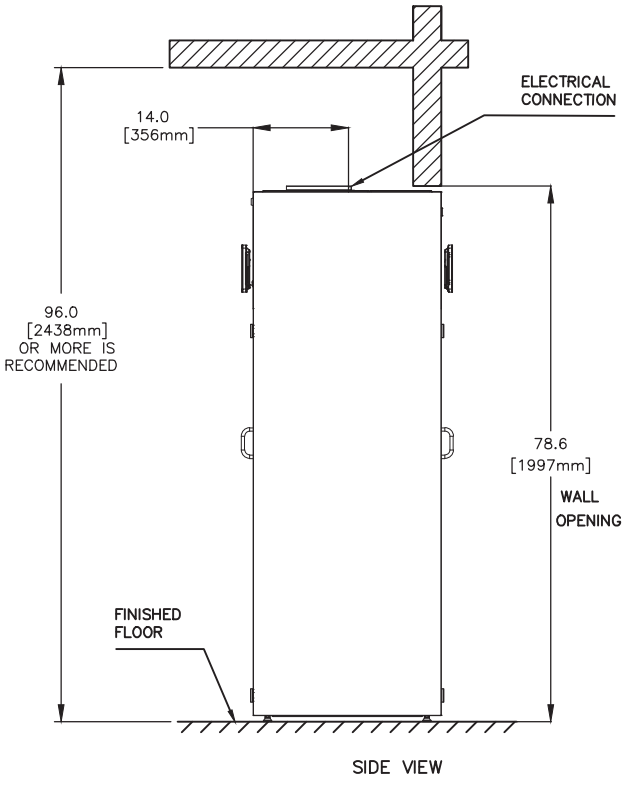
TITLE: EQUIPMENT_DRAWING
AMSCO_DRYING_CABINET_29"
INSTALLATION

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	GREG_KACHKA	11003253	11003253	A

29" PASS THROUGH DRYING CABINET
TYPICAL INSTALLATION





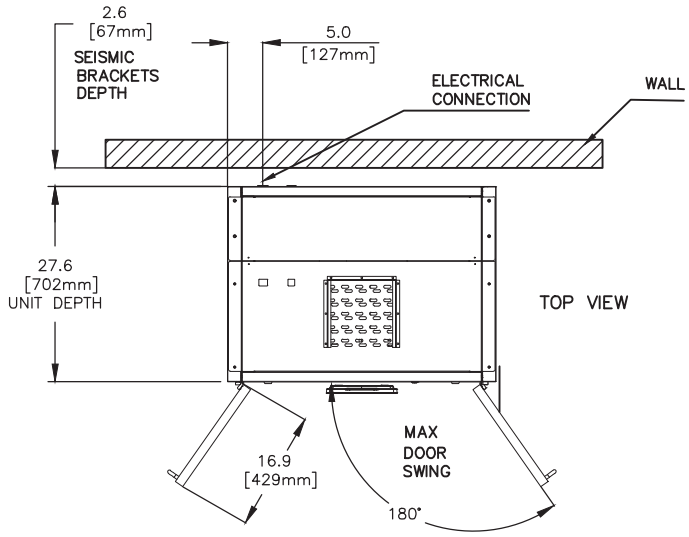


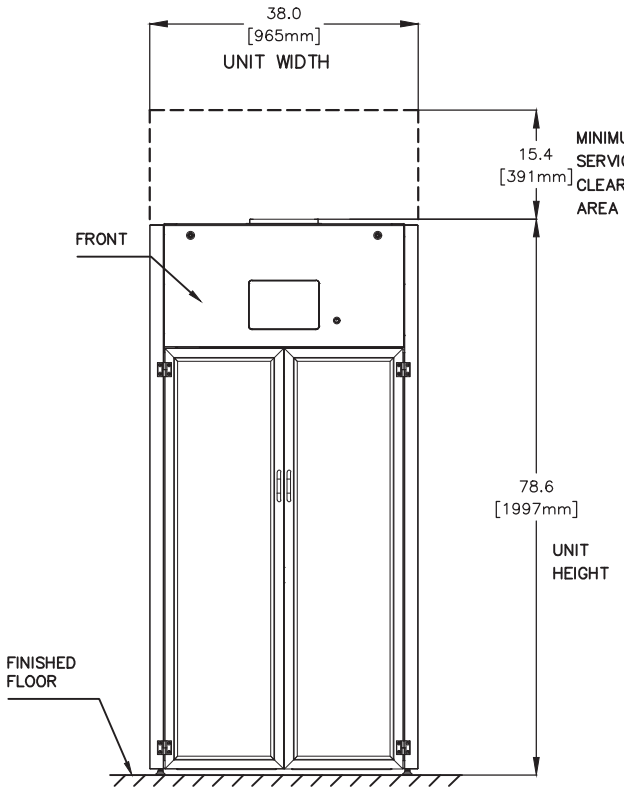
STERIS Corporation

TITLE: EQUIPMENT_DRAWING
AMSCO_DRYING_CABINET_29"_PASS_THROUGH
INSTALLATION

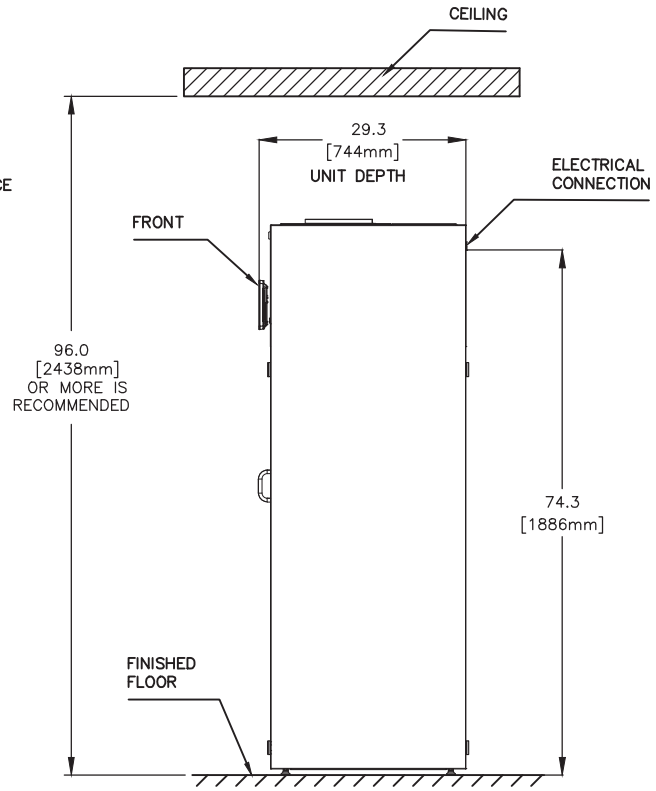
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	GREG_KACHKA	11003253	11003253	A

38" DRYING CABINET
TYPICAL INSTALLATION
(FLUSH WALL)





FRONT VIEW



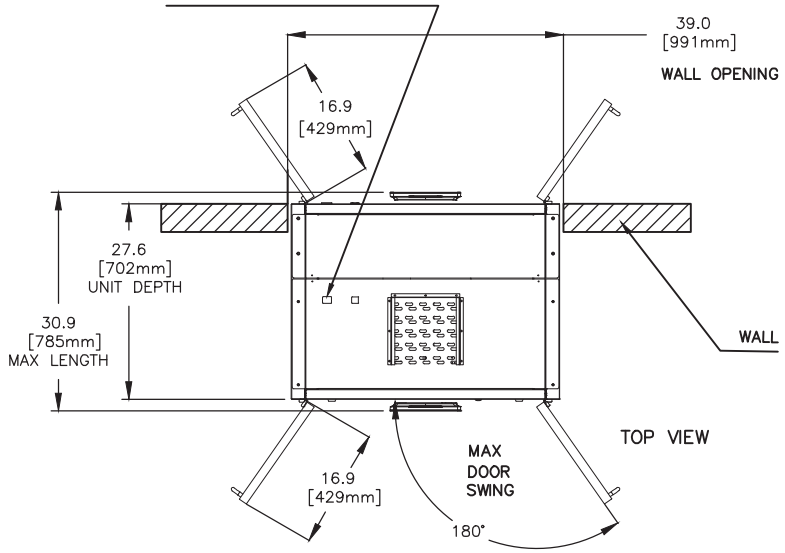
SIDE VIEW

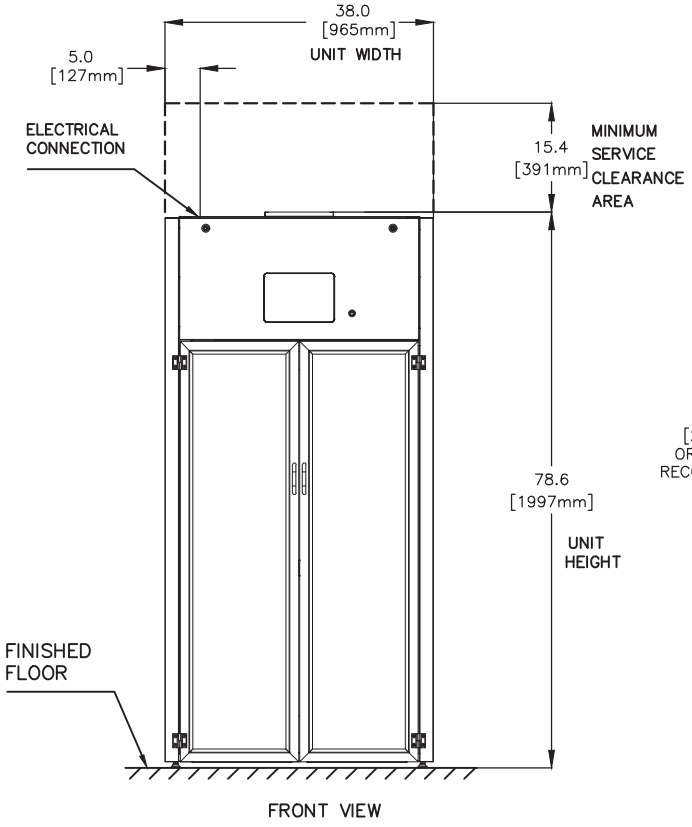
STERIS Corporation

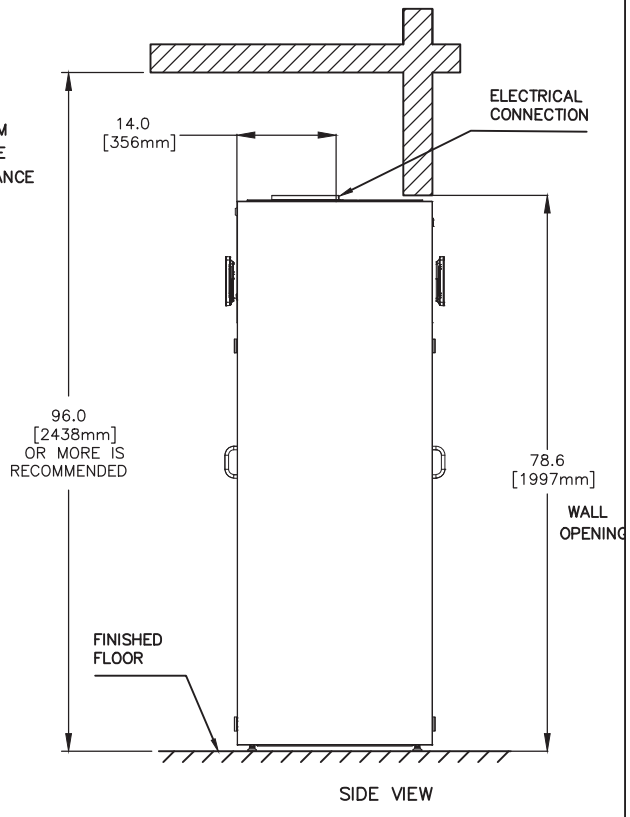
TITLE: EQUIPMENT_DRAWING
AMSCO_DRYING_CABINET_38"
INSTALLATION

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	GREG_KACHKA	11003253	11003253	A

38" PASS THROUGH DRYING CABINET
TYPICAL INSTALLATION







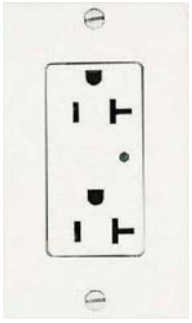
STERIS Corporation

TITLE: EQUIPMENT_DRAWING
AMSCO_DRYING_CABINET_38"_PASS_THROUGH
INSTALLATION

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	GREG_KACHKA	11003253	11003253	A

PHYSICAL SPECIFICATIONS		
SHIPPING DIMENSIONS	34 in x 53 in x 96in [0.86 m x 1.35 m x 2.44 m	
SHIPPING WEIGHT	29 INCH UNIT	38 INCH UNIT
	750 LB [340 KG]	850 LB [386 KG]
OPERATING WEIGHT (LOADED)	29 INCH UNIT	38 INCH UNIT
	650 LB [295 KG]	750 LB [340 KG]
OPERATING CONDITIONS	63°F - 77°F (17°C - 25°C) at 20% - 60% RH	
A-WEIGHTED SOUND POWER LEVEL	53 dBa	
HEAT LOSS	2500 BTU/HR at 70°F (21°C)	
ELECTRICAL	110 - 120VAC 20AMP DEDICATED WALL PLUG (AS SHOWN)	

CORD



WALL PLUG

INSTALLATION NOTES:

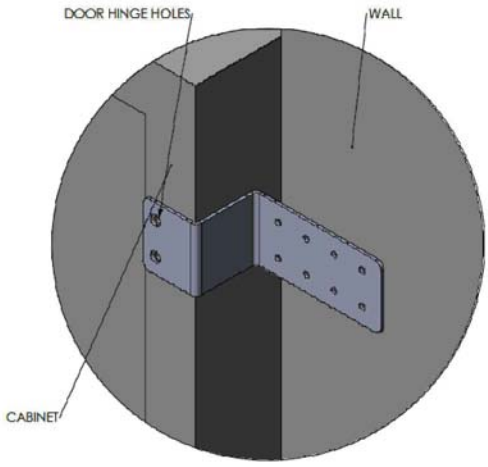
1. THE INSTALLATION OF THE HEATING CABINET MUST MEET ALL FEDERAL, STATE AND LOCAL REGULATIONS (NEC IN U.S., IEC IN EU AND CEC IN CANADA).
2. INSTALLATION SPECIFICATIONS IS LISTED AS ENGINEERING AND INSTALLATION GUIDES.
3. REFERENCED COMPONENTS AND SERVICE CONNECTIONS ARE NOT FURNISHED AS PART OF EQUIPMENT UNLESS UNDER WRITTEN AGREEMENT WITH STERIS
4. IT IS RECOMMENDED THAT THE HEATING CABINET BE INSTALLED IN AN AREA WITH A VENTILATION SYSTEM.
5. POWER CORD GRAY NEMA 5-20P TO IEC 320-C15 SJT TO BE INCLUDED WITH CABINET 10.0FT LONG
6. FOR PASS THROUGH UNITS, MAXIMUM WALL THICKNESS IS AT 6 INCHES (152.4 MM)
7. ALL DIMENSIONS ARE IN INCHES AND [MM].
8. LEVELING FEET ARE PROVIDED FOR PROPER INSTALLATION
9. THIS SERVICE CLEARANCE MUST BE MAINTAINED TO ALLOW ACCESS TO HEATING CABINET FOR SERVICEABILITY.
10. 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.

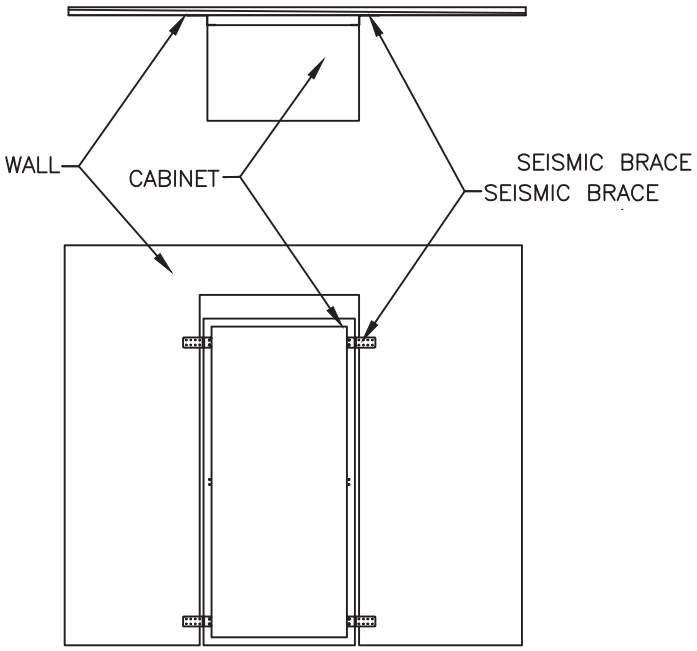
STERIS Corporation

TITLE: EQUIPMENT_DRAWING
AMSCO_DRYING_CABINET
GENERAL_NOTES

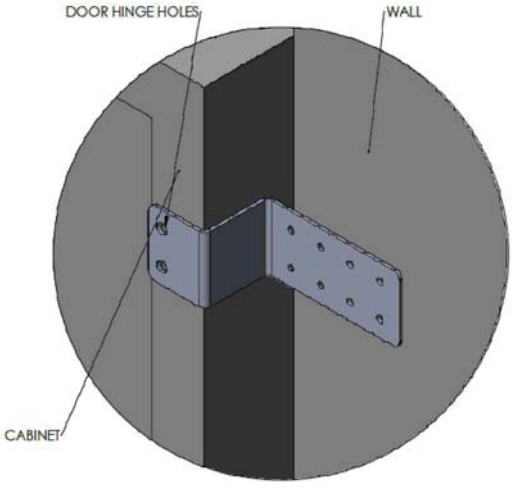
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	GREG_KACHKA	11003253	11003253	A

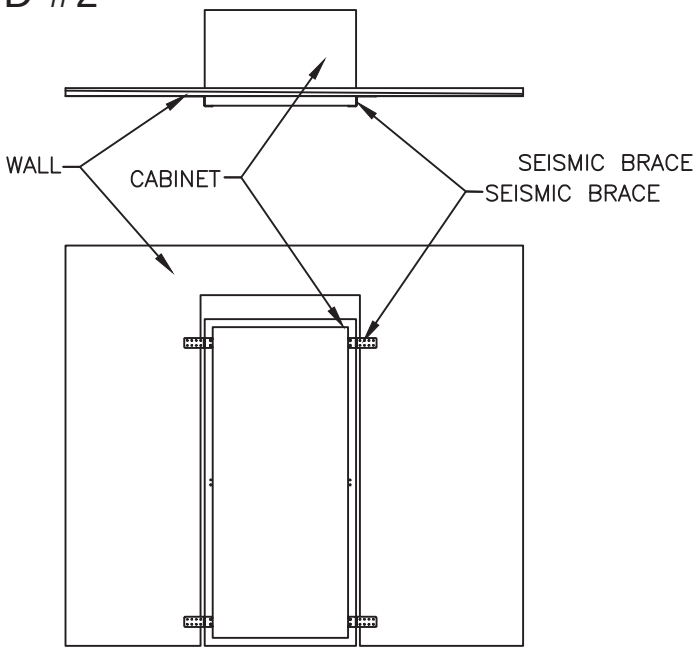
METHOD #1





METHOD #2



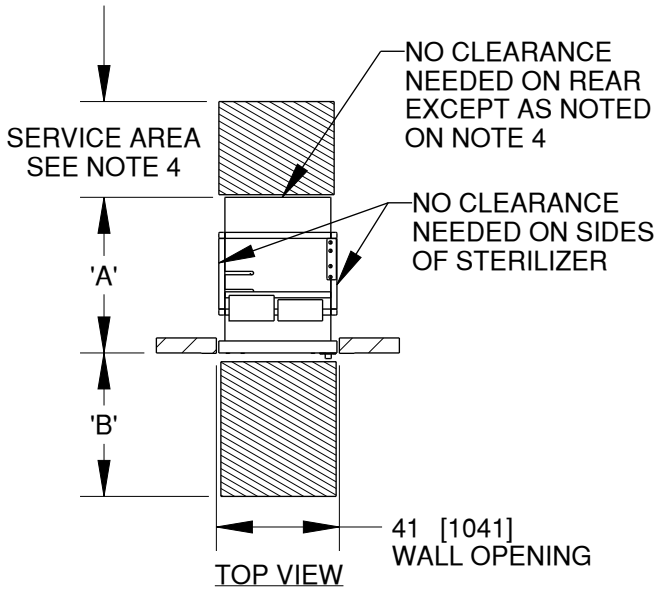


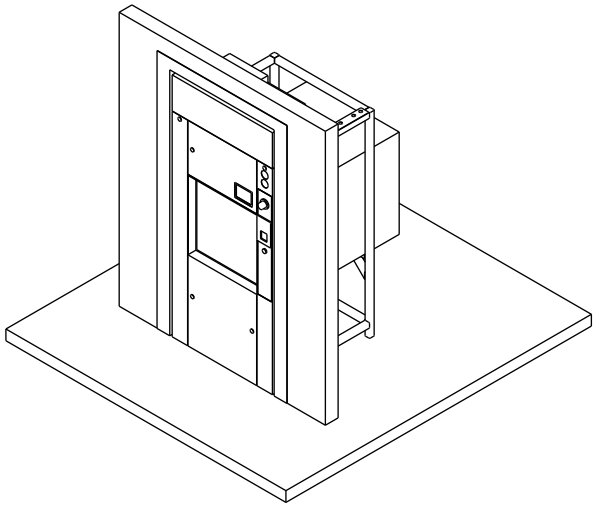
STERIS Corporation

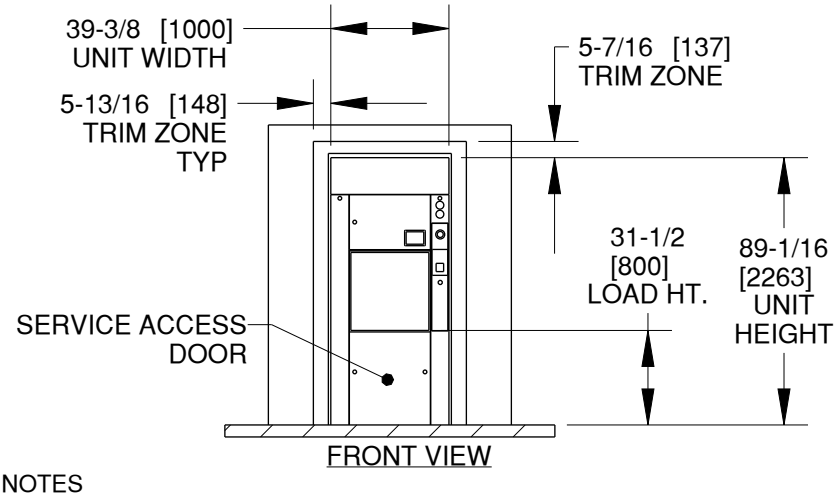
TITLE: EQUIPMENT_DRAWING
AMSCO_DRYING_CABINET
SEISMIC_INSTALLATION

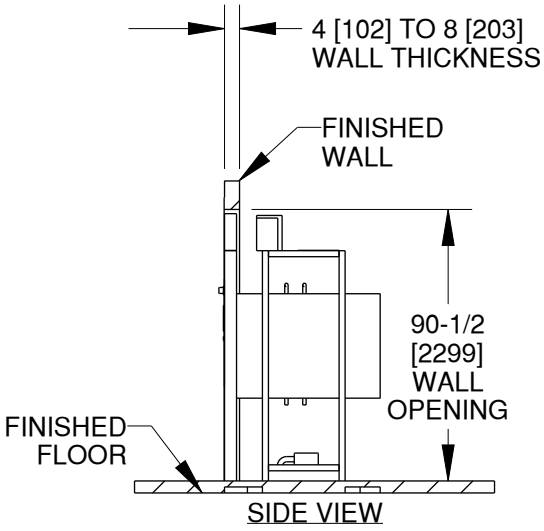
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	GREG_KACHKA	11003253	11003253	A

CHAMBER LENGTH	UNIT LENGTH - DIM. 'A'	MINIMUM SERVICE AND LOAD AREA - DIM. 'B'	
		WITHOUT ALUS	WITH ALUS
39" [991]	52-1/8" [1324]	78" [1981]	147-1/16" [3735]
51" [1295]	64-1/16" [1627]	102" [2591]	182-7/8" [4645]
63" [1600]	75-9/16" [1919]	126" [3200]	218-11/16" [5555]









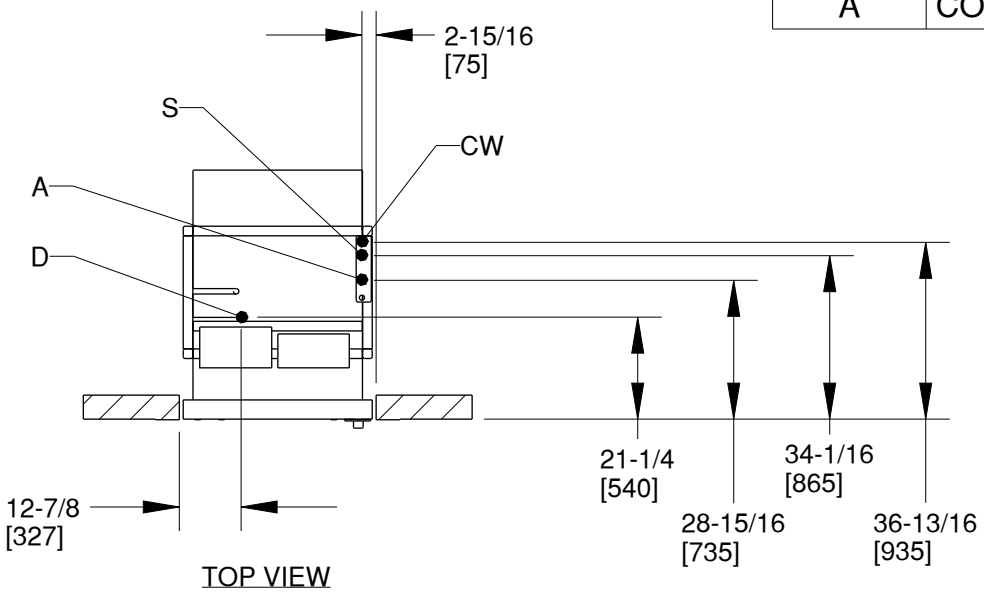
NOTES
1. THE FLOOR AREA (IN SERVICE CLEARANCE ARES) MUST BE SMOOTH AND HAVE A LEVEL TOLERANCE WITHIN ±1/2 deg OR ±1/16" PER FOOT, WITHOUT ANY OBSTRUCTIONS SUCH AS PIPING: WIRING, FLOOR SINKS, ETC.
2. SERVICE AND LOADING AREAS CLEARANCE OF UNIT SHOULD BE AT UNIT WIDTH.
3. SERVICE AREA SHOWN ARE SOLELY REPRESENTATION OF THE SPACE NEEDED TO SAFELY PERFORM PREVENTATIVE MAINTENANCE AND REPAIRS SERVICES. CUSTOMER IS RESPONSIBLE TO ENSURE CLEARANCE MEET OR EXCEED LOCAL AND NATIONAL CODE REQUIREMENTS. ADHERENCE TO LOCAL AND NATIONAL CODES AND PROCUREMENT OF PERMITS ARE THE RESPOSIBILITY OF THE CUSTOMER UNLESS AGREED TO IN WRITING WITH STERIS.
4. PROVIDE SERVICE ACCESS FROM BACK OF UNIT IF EQUIPPED WITH FOLLOWING ACCESSORIES:
   a. 30" [760] IF EQUIPPED WITH STERI-GREEN PLUS.
   b. 18" [460] IF EQUIPPED WITH STERI-GREEN.
5. ZERO CLEARANCE NEEDED OUTSIDE OF SERVICE AND LOADING AREAS.
6. ALUS EQUIPMENT DRAWING P/N: 11028378.
7. LOADING EQUIPMENT CART AND TRANSFER CARRIAGE EQUIPMENT DRAWING P/N: 11012876.
8. ALL DIMENSIONS ARE INCHES AND MILLIMETERS [MM].

STERIS Corporation

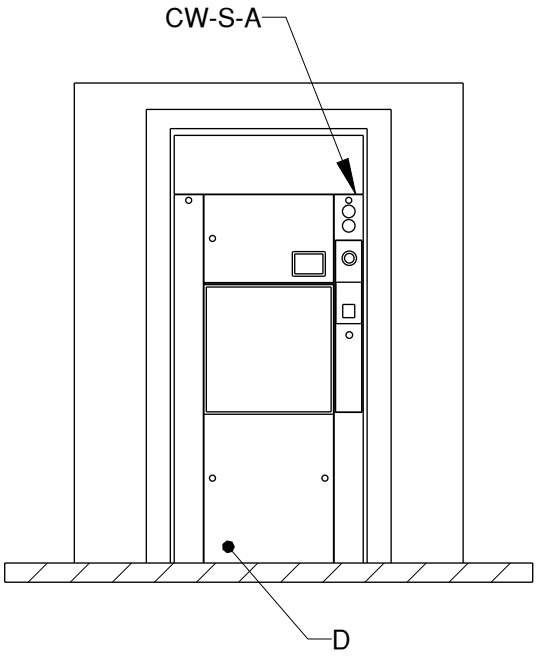
TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	-	Basch, Tyler	10307698	11001835	H

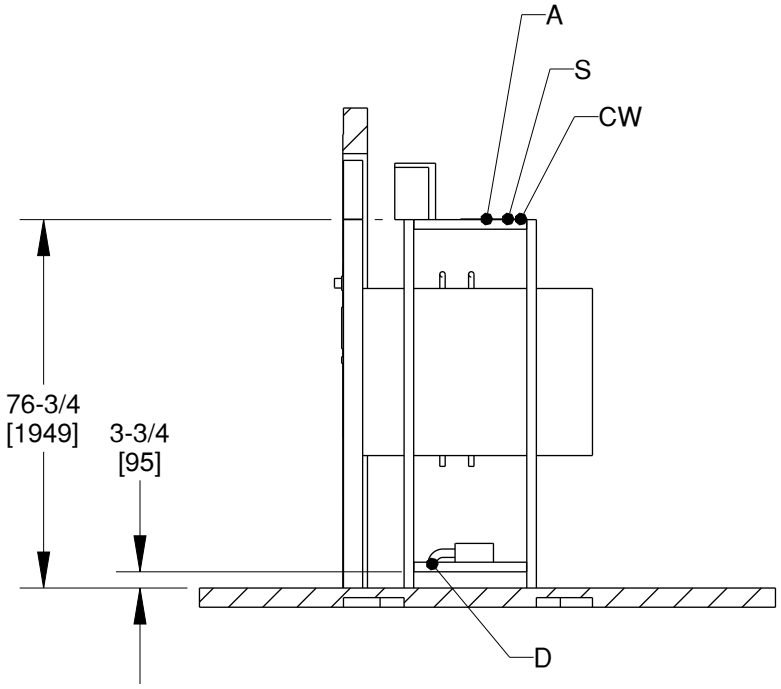
CW	COLD WATER
S	STEAM
D	DRAIN
A	COMPRESSED AIR



TOP VIEW



FRONT VIEW



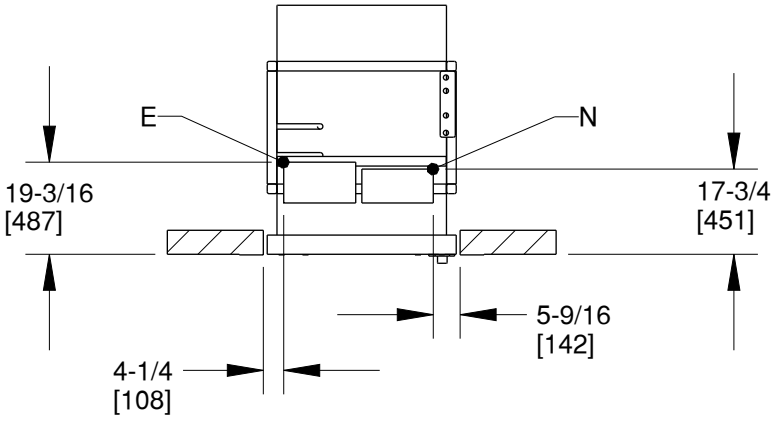
SIDE VIEW

STERIS Corporation

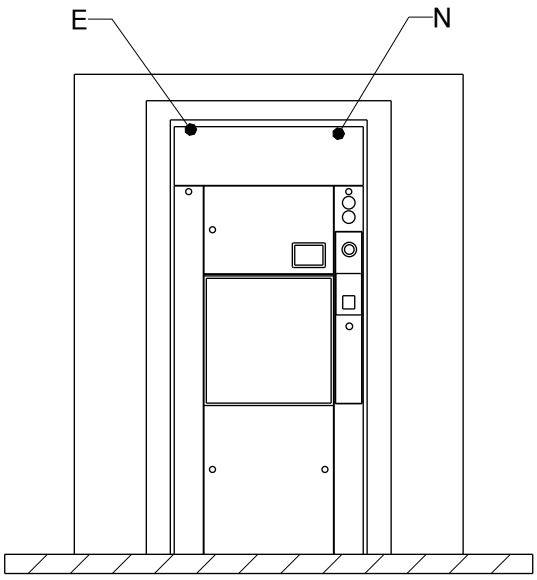
TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	-	Basch, Tyler	10307698	11001835	H

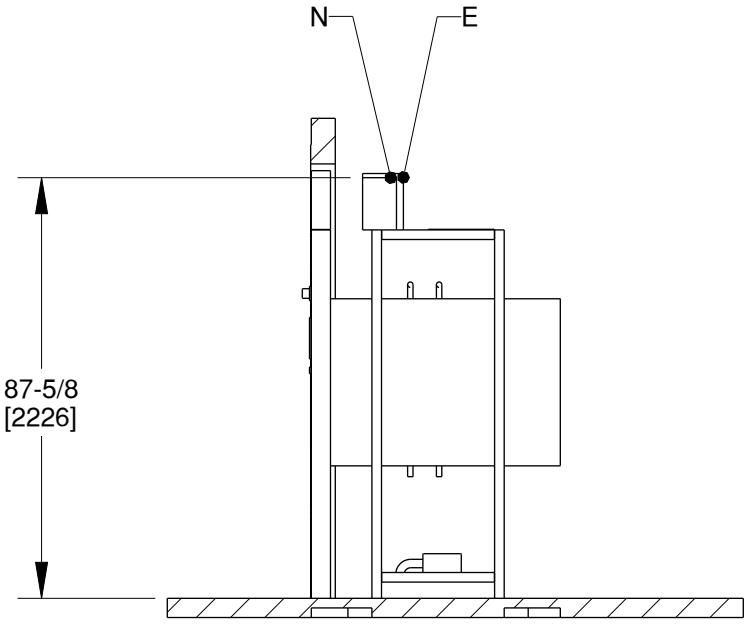
E	STERILIZER ELECTRIC
N	NETWORK



TOP VIEW



FRONT VIEW



SIDE VIEW

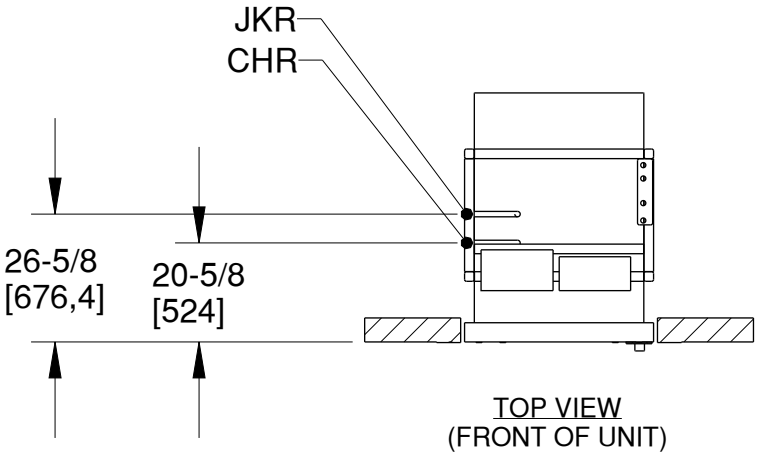
STERIS Corporation

TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

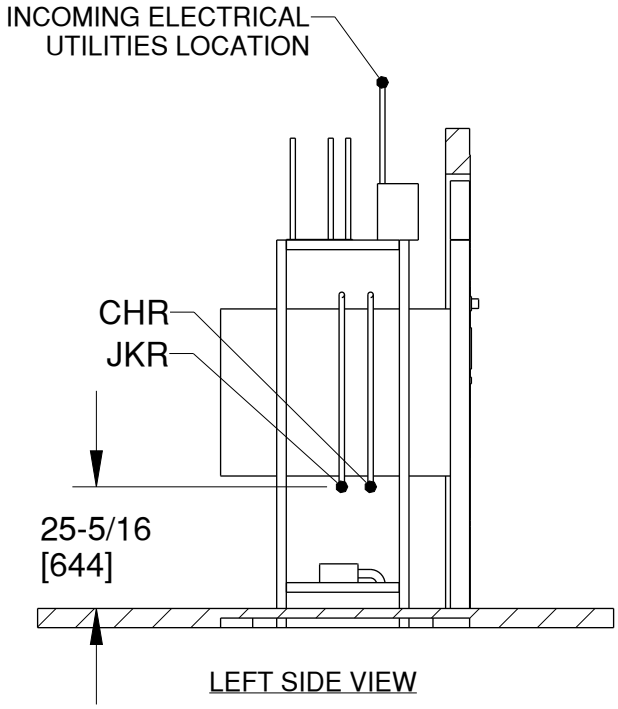
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	-	Basch, Tyler	10307698	11001835	H

JKR	JACKET RELIEF VALVE DISCHARGE PIPE - 1-1/8 ODT
CHR	CHAMBER RELIEF VALVE DISCHARGE PIPE - 1-1/8 ODT

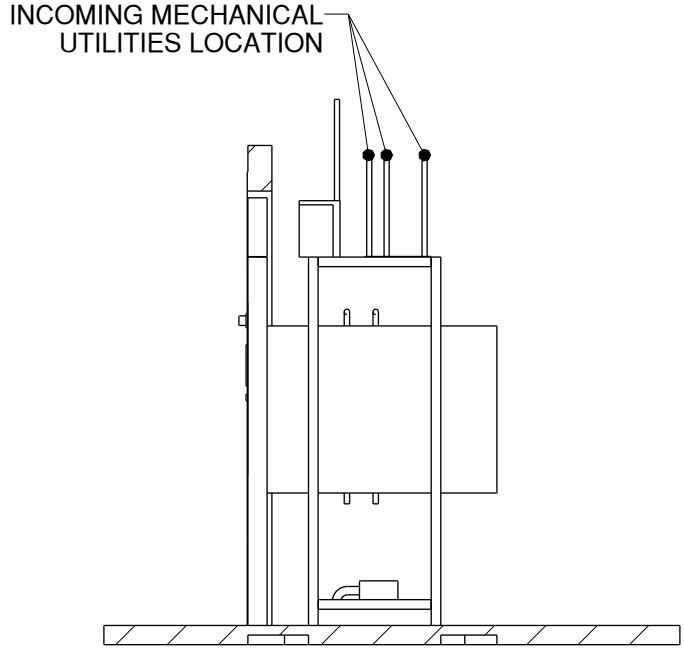
IMPORTANT: FOR OPTIMAL INSTALLATION, COMPRESSED AIR, WATER, STEAM, NETWORK, & POWER UTILITIES SHOULD BE SUPPLIED BY CUSTOMER FROM ABOVE THE UNIT IN THE LOCATION INDICATED ON THE DRAWING. CONSULT WITH STERIS IF A DEVIATION IS REQUIRED.



TOP VIEW
(FRONT OF UNIT)



LEFT SIDE VIEW



RIGHT SIDE VIEW

STERIS Corporation

TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	1/40	Basch, Tyler	10307698	11001835	H

MECHANICAL

UTILITY REQUIREMENTS CHART

UTILITY	PARAMETER	SPECIFICATIONS
STERILIZER COLD WATER (CW) SEE NOTE 11	CONNECTION SIZE/TYPE	3/4" NPT
	PRESSURE RANGE	20-50 DYNAMIC PSIG (1.4-3.4 BAR G)
	TEMPERATURE RANGE	40°-70° F (4°-21° C)
	MIN. FLOW RATE	12 GPM (45 LPM)
	AVERAGE CONSUMPTION	39" LG - PEAK: 12 GPM (45 LPM) PER CYCLE: 97 GAL (367 L) OUT OF CYCLE: 20 GPH (75 LPH)
		51" LG - PEAK: 12 GPM (45 LPM) PER CYCLE: 112 GAL (424 L) OUT OF CYCLE: 25 GPH (95 LPH)
		63" LG - PEAK: 12 GPM (45 LPM) PER CYCLE 128 GAL (484 L) OUT OF CYCLE: 30 GPH (114 LPH)
STEAM INLET (S) SEE NOTE 11	CONNECTION SIZE/TYPE	3/4" NPT
	VAPOR QUALITY	97 - 100 %
	PRESSURE RANGE	50-80 DYNAMIC PSIG (3.4 - 5.5 BARG)
	FLOW RATE	39" LG PEAK: 135 LB/HR (61 KG/HR)
		51" LG PEAK: 181 LB/HR (82 KG/HR)
		63" LG PEAK: 226 LB/HR (103 KG/HR)
	AVERAGE CONSUMPTION	39" LG - PER CYCLE: 35 LB (16 KG) OUT OF CYCLE: 25 LB/HR (11 KG/HR)
		51" LG - PER CYCLE: 45 LB (20 KG) OUT OF CYCLE: 33 LB/HR (15 KG/HR)
		63" LG - PER CYCLE: 55 LB (25 KG) OUT OF CYCLE: 42 LB/HR (19 KG/HR)
DRAIN (TO FLOOR SINK) (D) SEE NOTE 14	CONNECTION SIZE/TYPE	1-1/2" ODT OPEN
	AVERAGE OPERATING FLOW RATE	GRAVITY DRAIN MUST BE ABLE TO HANDLE PEAK WATER CAPACITY OF15 GPM (57LPM), MAX. DISCHARGE TEMP. 140°F (60°C)
	FLOOR SINK MIN. SIZE & ELEVATION	12" X 12" X 6" DEEP MIN. SIZE INSTALL AT FLOOR GRADE
COMPRESSED AIR (A) SEE NOTE 12	CONNECTION SIZE/TYPE	1/2" NPT
	PRESSURE RANGE	80-100 PSIG DYNAMIC 5.5 - 6.9 BAR G
	FLOW RATE	3 SCFM (5 SCMH)
	AIR QUALITY	OIL FREE, DRY (DEHUMIDIFIED)

NOTES

INSTALLATION SPECIFICATIONS:

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 THE STEAM LINE AND MAIN WATER HEADERS. SUPPLY THE SPECIFIED SERVICE PRESSURE AND FLOW RATE AT EQUIPMENT TERMINALS, INCLUDE EFFECT OF COINCIDENT DRAW OF MULTIPLE UNIT INSTALLATIONS.
2. DOOR OPENING DURING PRE-INSTALLATION SHALL BE AT MINIMUM 80"x40" [2032mm x 1016mm] (HxW).
3. PROVIDE PIPING, SHUTOFF 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.
4. RECOMMENDED PROVISION OF BLOW DOWN VALVE AT EACH STEAM AND WATER STRAINER TO ENABLE STRAINER CLEAN OUT.
5. BLOW DOWN BUILDING (FACILITY) AIR STEAM AND WATER SUPPLY LINES BEFORE FINAL CONNECTION TO THE EQUIPMENT.
6. THE STERILIZER IS NOT SUPPLIED WITH A VACUUM BREAKER OR BACKFLOW PREVENTER. WHERE REQUIRED BY LOCAL CODES, INSTALLATION OF A VACUUM BREAKER IN THE WATER LINE IS SUPPLIED BY OTHER PARTIES. STERIS OFFERS A BACKFLOW PREVENTER AS AN OPTION.
7. PLACEMENT OF PIPING SHUTOFFS, WHEN INSTALLING. SHUTOFF VALVES MUST BE LOCATED IN A SUITABLE POSITION WITHIN THE LINE OF SIGHT, AND CLEAR OF ANY OBSTRUCTIONS THAT PLACE THE SERVICE PERSONNEL IN HARMS WAY, IN ORDER TO TURN THE VALVE OFF.
8. REQUIRED PIPING PRACTICES FOR RELIEF VALVE PIPING CAN BE FOUND IN ASME BOILER CODE AND PRESSURE VESSEL CODE, SECTION VIII (8), PER PARAGRAPH UG-135.
9. FOR GENERAL INSTALLATION INFORMATION SEE STERIS DRAWING NUMBER 62941-091.
10. FOR MULTIPLE UNITS INSTALLATION, SET LOAD HEIGHT (DISTANCE BETWEEN FLOOR TO BOTTOM OF CHAMBER) WITHIN ±1/16" FOR ALL UNITS.
11. FOR FEED WATER AND STEAM QUALITY SEE STERIS DRAWING NUMBER 62941-091.
12. OPTIONAL AIR COMPRESSOR IS AVAILABLE: CONTACT STERIS FOR MORE INFORMATION.
13. IN CYCLE CONSUMPTION DATA BASED ON PREVAC OF 270°F, 4 MINUTE STERILIZE, 30 MINUTE DRY WITH METAL LOAD.
14. CUSTOMER SUPPLIED DRAIN EXTENSION SHOULD BE ANCHORED.

STERIS Corporation

TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	-	Basch, Tyler	10307698	11001835	H

ELECTRICAL

UTILITY REQUIREMENTS CHART

UTILITY	PARAMETER	SPECIFICATIONS
STERILIZER ELECTRIC (E)	208-240 VAC THREE PHASE 3 WIRE AND GROUND 60 HZ	CURRENT 10 AMPS, RECOMMENDED PROTECTION 20 AMPS, #12 [3.31] AWG
	380-400 VAC THREE PHASE 3 WIRE AND GROUND 50/60 HZ	CURRENT 7 AMPS, RECOMMENDED PROTECTION 20 AMPS, #12 [3.31] AWG
	440-480 VAC THREE PHASE 3 WIRE AND GROUND 60 HZ	CURRENT 7 AMPS, RECOMMENDED PROTECTION 20 AMPS, #12 [3.31] AWG
	POWER CONSUMPTION PER CYCLE	1.8 KWH
NETWORK (N)	AREA NETWORK	100/1000 BASE T SUPPORTING TCP/IP PROTOCOL RJ45F CONNECTION

NOTES

ELECTRICAL UTILITY REQUIREMENTS

1. ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES.
2. ALWAYS FOLLOW LOCAL ELECTICAL CODES AND SAFETY-RELATED WORK PRACTICES TO DETERMINE THE VALUE OF PRODUCTION.
3. DISCONNECT SWITCHES WITH OFF POSITION LOCKOUT (SUPPLIED BY OTHERS) MUST BE INSTALLED IN ELECTRIC SUPPLY LINES THAT ARE NOT SUPPLIED BY STERIS.
4. STERIS RECOMMENDS A LAMP IN SERVICE AREA TO ILLUMINATE THE SURROUNDING SPACE.

INSTALLATION SPECIFICATIONS:

1. PROVIDE GROUPED OR GANGED CIRCUIT PROTECTION AND DISCONNECT FOR STERILIZER POWER AS REQUIRED BY CODES AND STANDARDS. INDIVIDUAL POWER SHUTOFFS REQUIRED PER STANDARDS. INDIVIDUAL POWER SHUTOFFS REQUIRED NEAR MACHINE FOR SERVICING.
2. PROVIDE GROUNDED METAL CONDUIT AND WIRING BETWEEN EQUIPMENT TERMINALS AND STUB OUT OR DISCONNECTS. CHECK LOCAL CODES FOR MINIMUM AWG. WIRE SIZE.
3. PLACEMENT OF ELECTRICAL DISCONNECTS: WHEN INSTALLING; DISCONNECTS MUST BE LOCATED IN SUITABLE LOCATIONS WITHIN LINE OF SIGHT AND CLEAR OF ANY OBSTRUCTIONS THAT WOULD PUT THE SERVICE PERSON OR OPERATOR IN HARMS WAY IN ORDER TO TURN 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. DO NOT USE GROUND FAULT CURRENT INTERRUPTER (GFCI).
5. MAIN INCOMING POWER WIRING TO HAVE 167°F (75°C) INSULATION RATING MINIMUM, COPPER ONLY.

REQUIREMENT NOTE:

CIRCUIT BREAKER IS REQUIRED. INSTALL NEAR EQUIPMENT WITHIN EASY REACH OF THE OPERATOR AND MARKED AS 'DISCONNECTING DEVICE' FOR THE EQUIPMENT.

NETWORK CONNECTION (IF APPLICABLE):
- ACTIVE NETWORK DROP WITH CAT 5/6 CABLE WITHIN 10' OF UNIT
- STATIC OR DHCP RESERVED IP ADDRESS (FOR EACH UNIT)
- NETWORK CABLE SUPPLIED BY FACILITY

STERIS Corporation

TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	-	Basch, Tyler	10307698	11001835	H

PHYSICAL

SPECIFICATIONS CHART

CURB WEIGHT	39" LG - 2090 LBS (944 KG)	
	51" LG - 2350 LBS (1066 KG)	
	63" LG - 2605 LBS (1182 KG)	
MAXIMUM OPERATING WEIGHT BASED ON CHAMBER FULLY LOADED WITH INSTRUMENTS	39" LG - 2315 LBS (1050 KG)	
	51" LG - 2650 LBS (1202 KG)	
	63" LG - 2980 LBS (1352 KG)	
SHIPPING WEIGHT	39" LG - 2640 LBS (1197 KG)	
	51" LG - 2900 LBS (1315 KG)	
	63" LG - 3195 LBS (1449 KG)	
SHIPPING DIMENSIONS W x H x L	39" LG - 62 1/2" W x 89 1/4" H x 79 1/2" L [1588mm W x 2267mm H x 2019mm L]	
	51" LG - 62 1/2" W x 89 1/4" H x 79 1/2" L [1588mm W x 2267mm H x 2019mm L]	
	63" LG - 62 1/2" W x 89 1/4" H x 91 1/2" L [1588mm W x 2267mm H x 2324mm L]	
HEAT LOSS AT 70° F (21°C) BTU & (kJ) /HR PREVACUUM	FRONT OF WALL	BACK OF WALL
26.5" X 26.5" X 39" LG [673 X 673 X 991 LG]	5620 BTU (5908 kJ)	6280 BTU (6626 kJ)
26.5" X 26.5" X 51" LG [673 X 673 X 1295 LG]	5620 BTU (5908 kJ)	6480 BTU (6837 kJ)
26.5" X 26.5" X 63" LG [673 X 673 X 1600 LG]	5620 BTU (5908 kJ)	6680 BTU (7048 kJ)
NOISE LEVEL	64 dB A	

1. LEVELING FEET ARE PROVIDED FOR PROPER INSTALLATION. STERILIZER MUST BE LEVELED DURING INSTALLATION. CHECK LEVELNESS FRONT TO BACK, SIDE TO SIDE, AND DIAGONAL.
2. STERIS DOES NOT ASSUME ANY RESPONSIBILITY FOR CHANGES MADE NECESSARY THROUGH FAILURE TO OBSERVE THE SPECIFICATIONS ON THE EQUIPMENT DRAWING AND NOTE SHEETS. SPECIFICATIONS AND DESCRIPTIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ADDITIONAL INSTALLATION SPECIFICATIONS NOTES

A. INSTALLATION SPECIFICATION IS LISTED AS ENGINEERING AND INSTALLATION GUIDES. REFERENCED COMPONENTS AND SERVICE CONNECTIONS ARE NOT FURNISHED AS PART OF EQUPMENT UNLESS INSTALLATION IS QUOTED SEPERATELY AND TO BE PERFORMED BY STERIS.

B. 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.

C. 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.

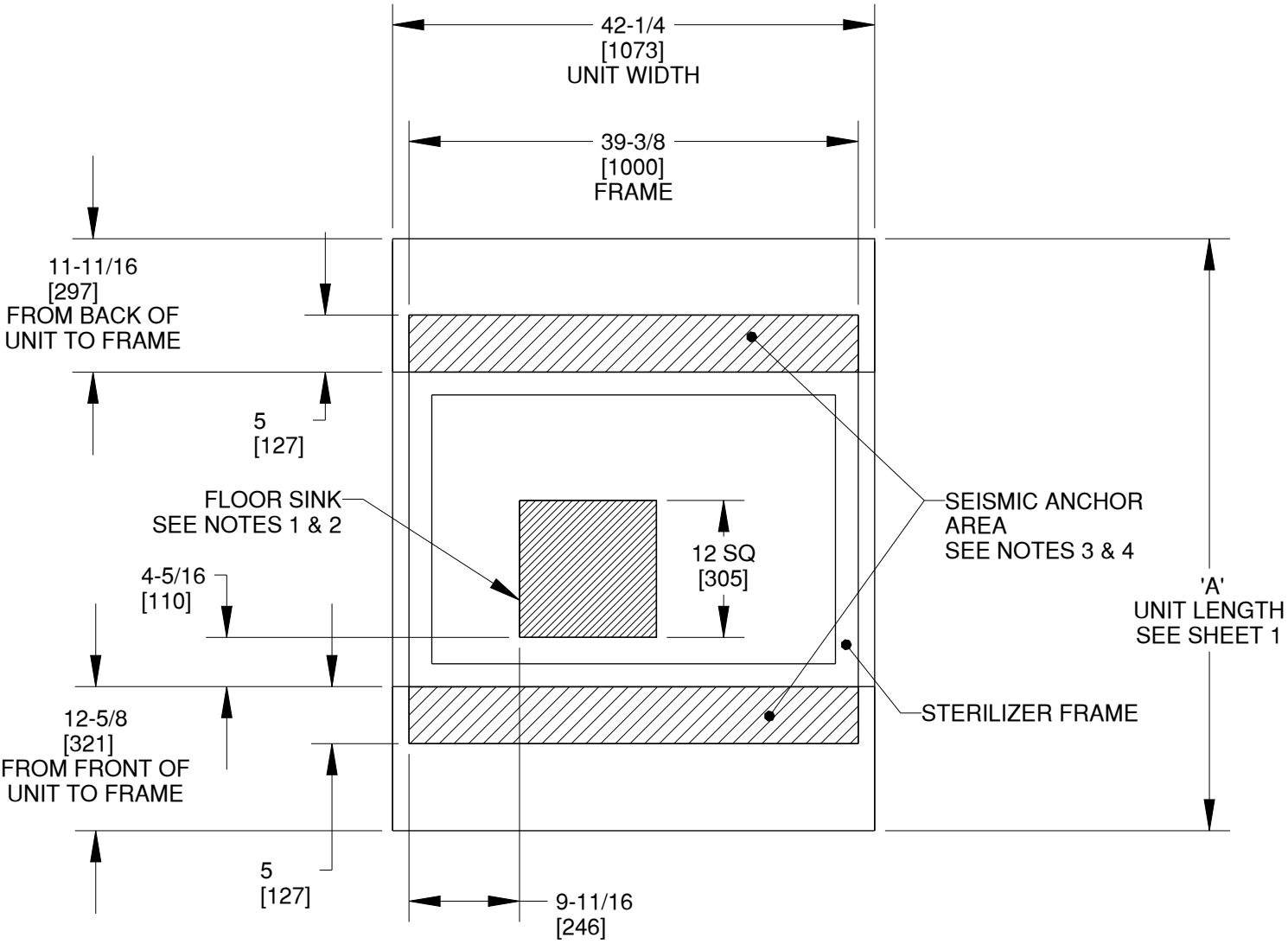
D. FOR GENERAL INSTALLATION INFORMATION SEE STERIS ADDENDUM (DRAWING 62941-091) ATTACHED TO THE END OF THIS DOCUMENT. (THIS DRAWING SHOULD ALWAYS ACCOMPANY THE EQUIPMENT DRAWING) IF DRAWING IS NOT INCLUDED, CONTACT STERIS SERVICE ENGINEERING AT 1-800-333-8848 FOR A COPY.

STERIS Corporation

TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	-	Basch, Tyler	10307698	11001835	H

FLOOR SINK AND SEISMIC ANCHORS



NOTES:
1. ENSURE INSTALLED FLOOR SINK IS ABLE TO HANDLE PEAK WATER CAPACITY PER SHEET 5. DRAIN FIXTURE AND SINK TO BE PROVIDED BY OTHERS.
2. FLOOR DRAIN OR SINK IS RECOMMENDED FOR EACH CUBICLE STERILIZER UNIT, AND SHOULD BE PROVIDED WITHIN THE CONFINES OF THE STERILIZER FRAMEWORK. SEE DIMENSIONS SHOWN IN TOP VIEW.
3. USE SEISMIC KIT PART NUMBER 11012047 FOR ANCHOR LOCATIONS.
4. VERIFY THAT THE CONCRETE SLAB, TO WHICH THE EQUIPMENT IS SEISMIC ANCHORED, MEETS THE REQUIREMENTS OF THE APPLICABLE ICC ESR AND OPM CERTIFICATION.
5. ASSURE ACCESS IS AVAILABLE FOR SEISMIC INSTALLATION.
6. ASSURE AT LEAST 18" OF CLEARANCE IS AVAILABLE FROM BACK OF UNIT FOR SEISMIC ANCHORS INSTALLATION.

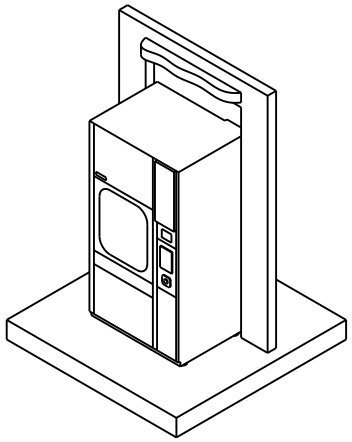
STERIS Corporation

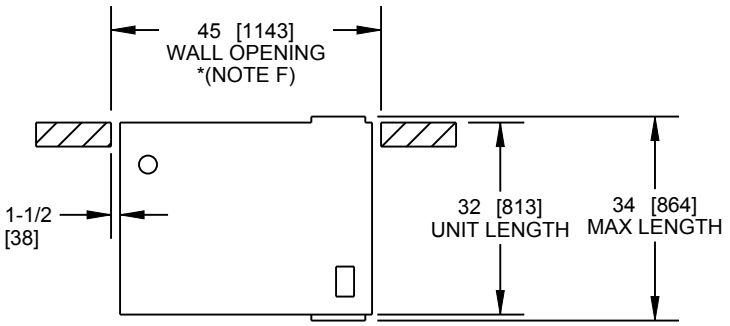
TITLE: EQUIPMENT DRAWING, AMSCO 600 , 26.5" X 26.5" X 39", 51", & 63" LG. SLIDING, SD, RECESSED WALL, FACILITY STEAM HEAT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	3/160	Basch, Tyler	10307698	11001835	H

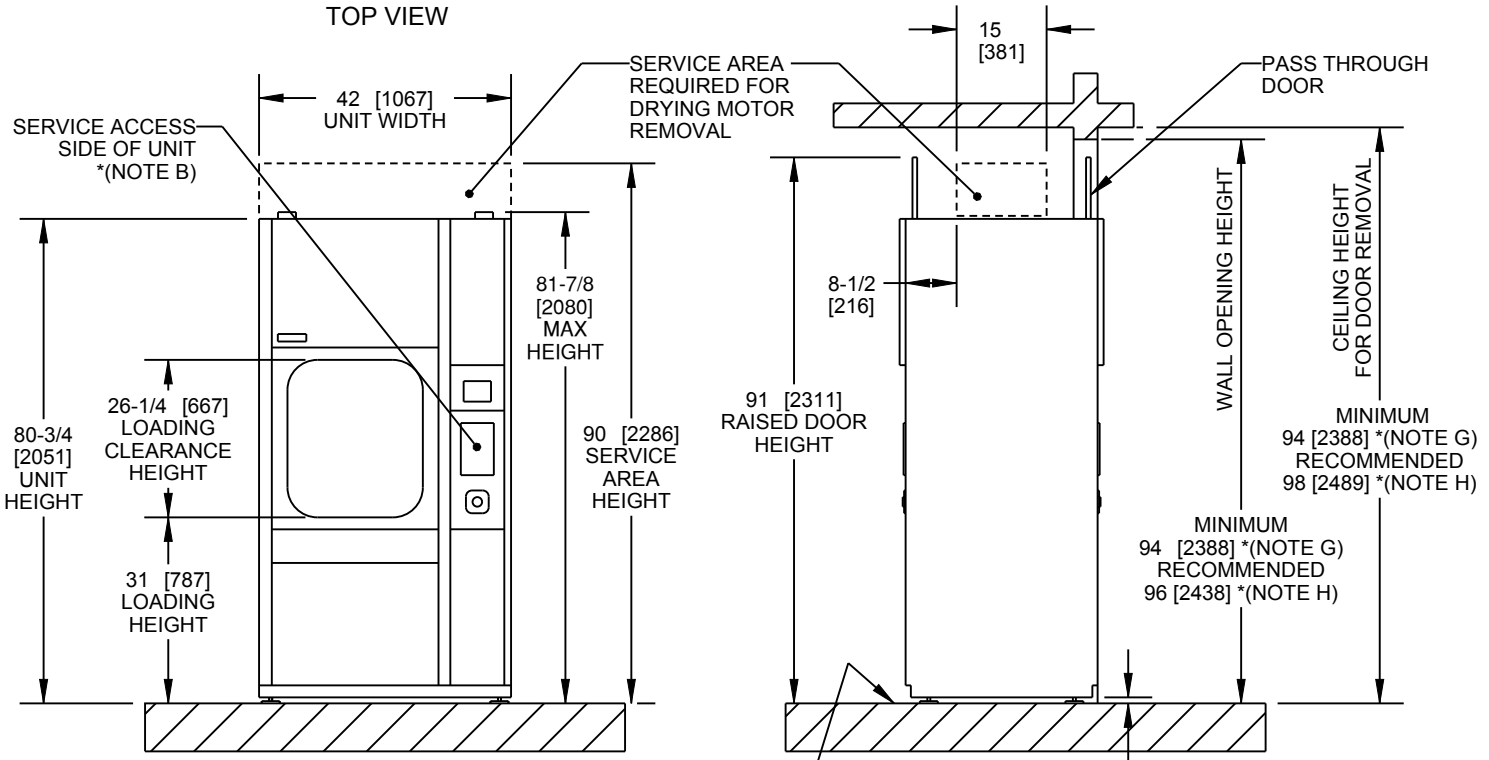
Released

TYPICAL INSTALLATION





TOP VIEW



FRONT VIEW

SIDE VIEW

NOTES:

(A) UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES [mm].
(B) SERVICE ACCESS SIDE OF UNIT IS RECOGNIZED BY THE TOUCH SCREEN AT THE RIGHT OF WASH CHAMBER. ELECTRICAL AND CONTROL COMPONENTS, AS WELL AS MOST OF SERVICABLE PARTS ARE ACCESSIBLE FROM THAT SIDE OF UNIT. NON-SERVICE SIDE IS EQUIPPED WITH THE TOUCH SCREEN ON THE LEFT OF THE WASH CHAMBER.
(C) CUSTOMER MUST BE SURE THAT MACHINE STANDS ON A NON-COMBUSTIBLE FLOOR.
(D) WEIGHTED EQUIVALENT SURFACE SOUND PRESSURE LEVEL: 64.0 dB(A) CALCULATED AS DESCRIBED IN ISO 3746.
(E) VERTICAL BARRIER WALL FLANGES ARE PROVIDED WITH UNIT TO FILL GAP BETWEEN UNIT AND WALL ON BOTH SIDES. DIMENSIONS ARE 3-1/2 in [89 mm] WIDTH X 80 in [2032 mm] LONG.
(F) HORIZONTAL BARRIER WALL FLANGES ARE PROVIDED WITH UNIT TO FILL GAP BETWEEN UNIT AND WALL ON BOTH SIDES. DIMENSIONS ARE 49 in [1245 mm] WIDTH X 16 in [406 mm] HEIGHT.
(G) MINIMUM REQUIRED DIMENSION FOR DOOR REMOVAL WITH LIMITED ADJUSTMENT AVAILABLE: +0 in [0 mm]
THE STANDARD BARRIER WALL FLANGES CAN'T BE USED AT THAT DIMENSION. -3/4 in [19.1 mm]
(H) RECOMMENDED DIMENSION FOR DOOR REMOVAL WITH FULL LEVELING ADJUSTMENT AVAILABLE: +1 in [25.4 mm]
THE STANDARD BARRIER WALL FLANGES CAN BE USED AT THAT DIMENSION. *(NOTE E AND F) -3/4 in [19.1 mm]

STERIS Corporation

TITLE

EQUIPMENT DRAWING OF
AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR

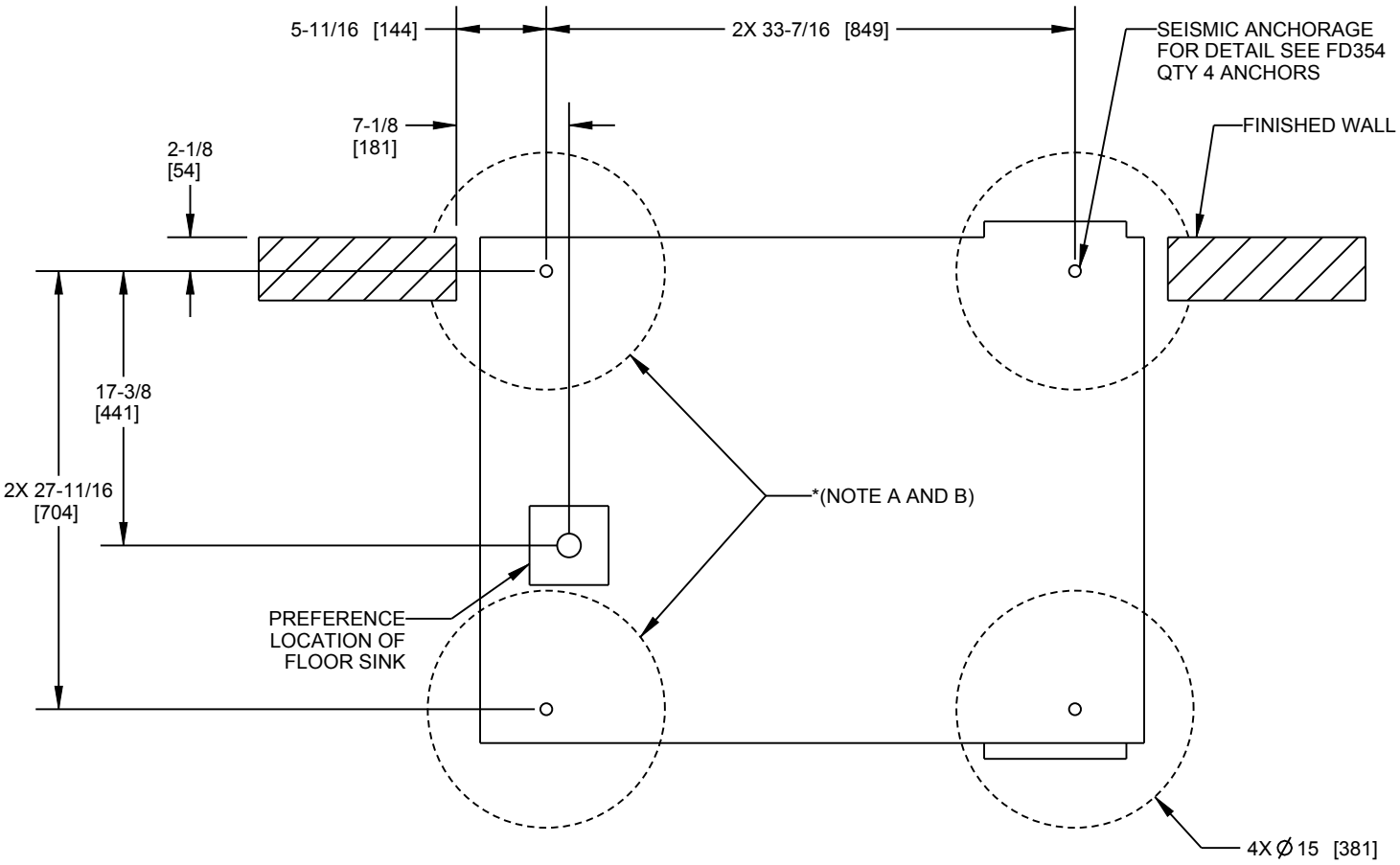
STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	

10292218.D

Released

SEISMIC MOUNTS



*NOTES:

(A) CONCRETE FLOOR MUST REMAIN FREE OF DEFECTS IN THESE AREA, AS PER ESR-1917 & ESR-3187. FOR INSTALLATION OF SEISMIC ANCHORS (NOT PROVIDED BY STERIS).
(B) THE FLOOR SINK AND DRAIN SHALL NOT OCCUPY THESE AREAS. 5 in x 5 in [127 mm x 127 mm] FLOOR SINK WITH Ø4 in [102 mm] DRAIN IS RECOMMENDED WHEN USING SEISMIC MOUNTS.

STERIS Corporation

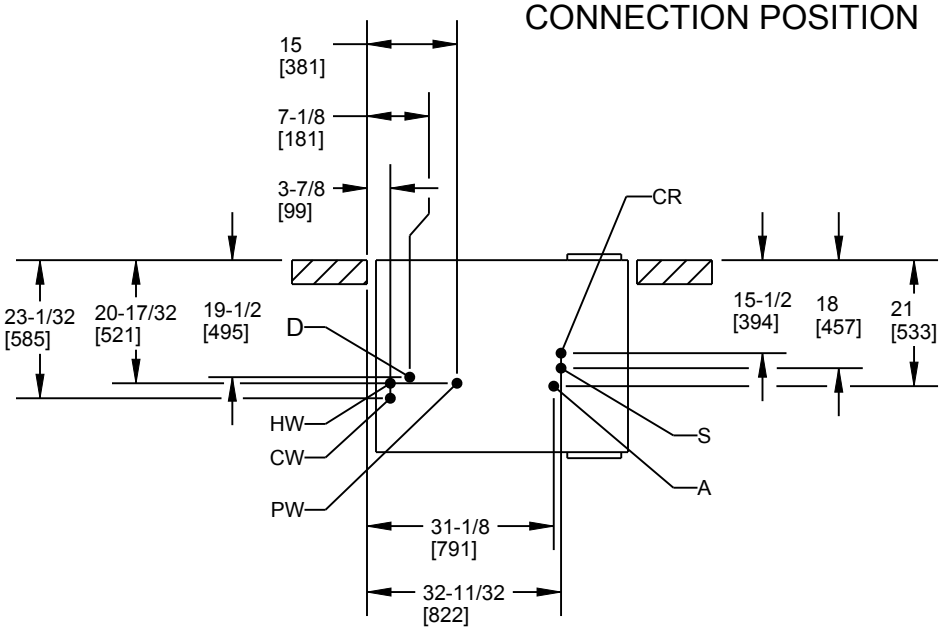
TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	

10292218.D

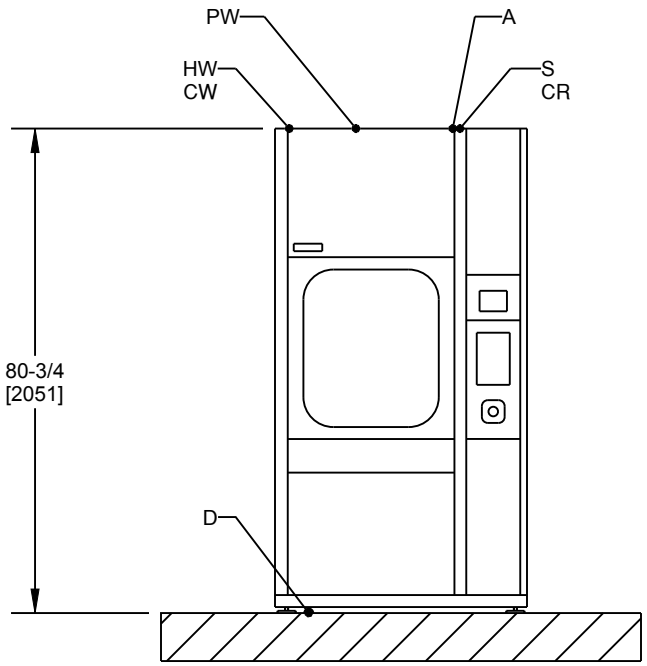
Released

UTILITY (PLUMBING) CONNECTION POSITION

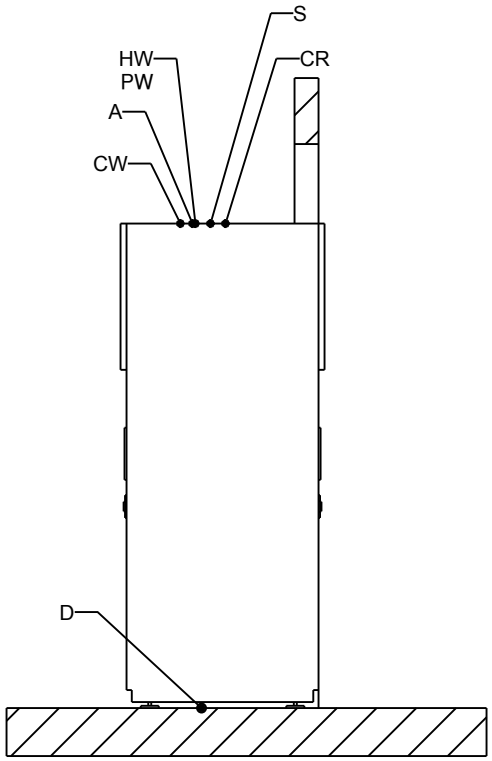


HW	HOT WATER
CW	COLD WATER
PW	PURE WATER
A	COMPRESSED AIR
D	FLOOR DRAIN LOCATION
S	STEAM
CR	CONDENSATE RETURN

TOP VIEW



FRONT VIEW



SIDE VIEW

STERIS Corporation

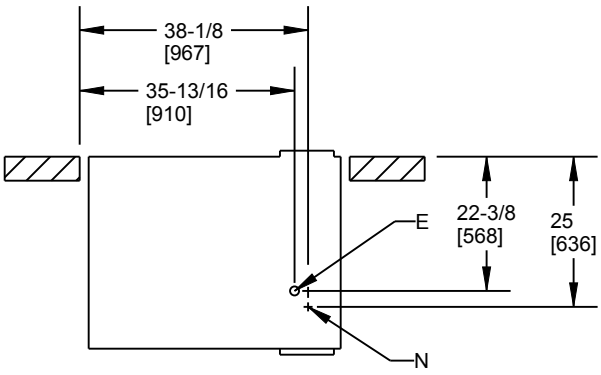
TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

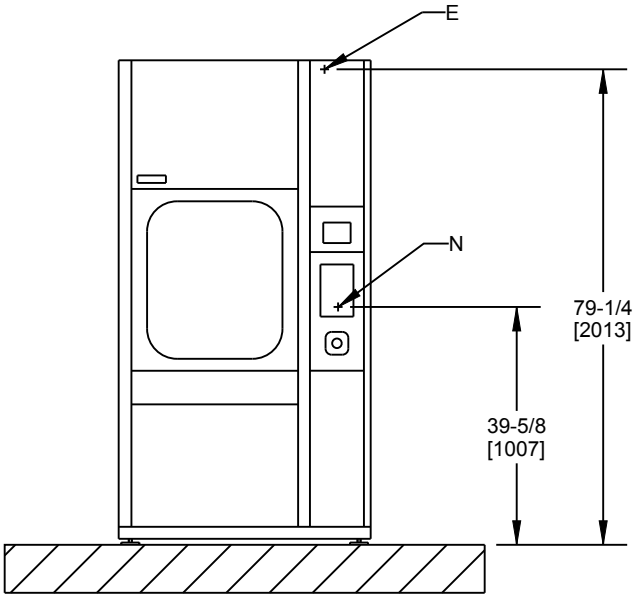
Released

UTILITY (ELECTRICITY) CONNECTION POSITION

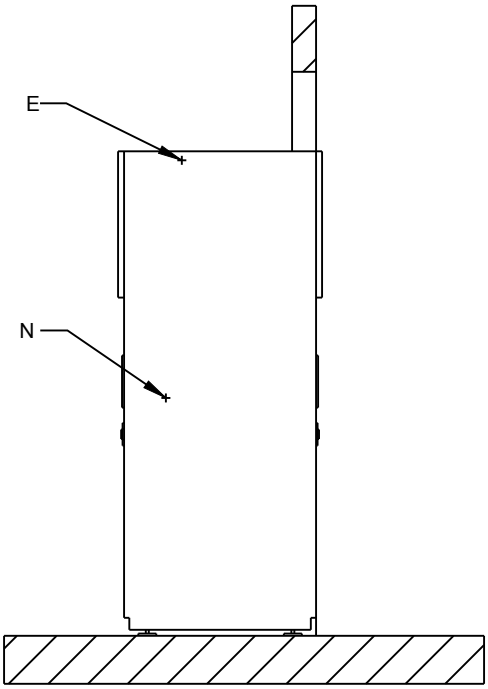
E	ELECTRICAL
N	NETWORK



TOP VIEW



FRONT VIEW



SIDE VIEW

STERIS Corporation

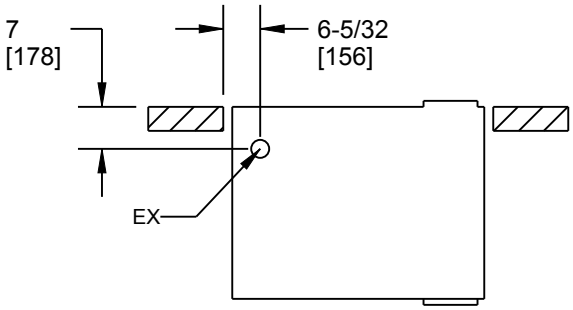
TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

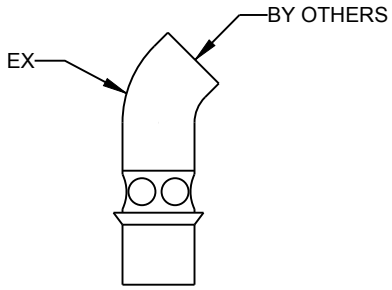
Released

UTILITY (VENTILATION) CONNECTION POSITION (OPTIONAL)

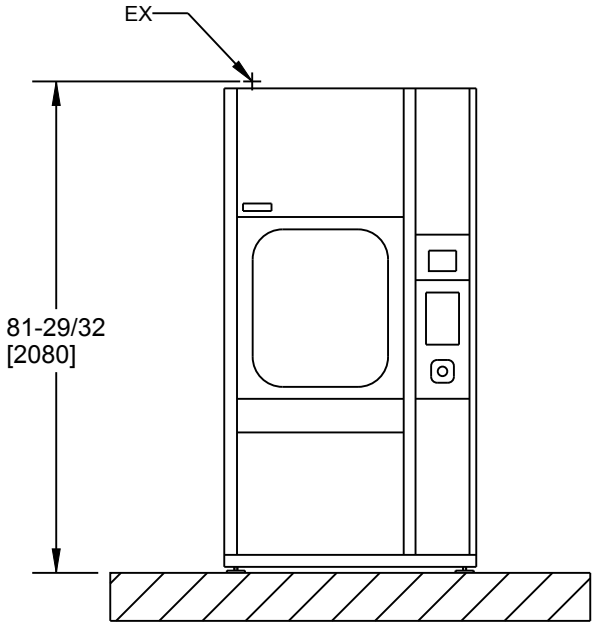
EX	VENTILATION EXHAUST



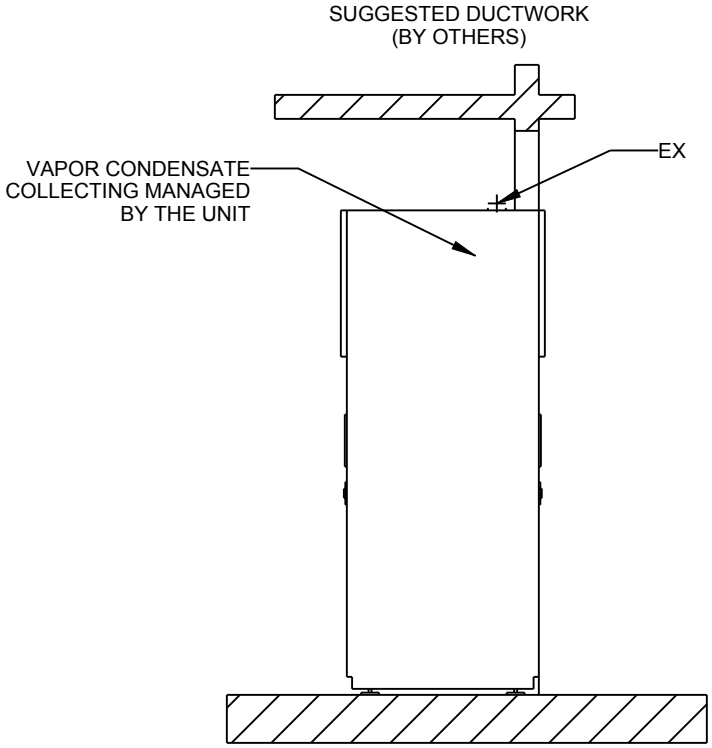
TOP VIEW



VENTILATION CONNECTION (OPTIONAL)
(SEE PAGE 9 *(NOTE 1)
DRY CONTACT (SEE PAGE 10 *(NOTE 3))



FRONT VIEW



SIDE VIEW

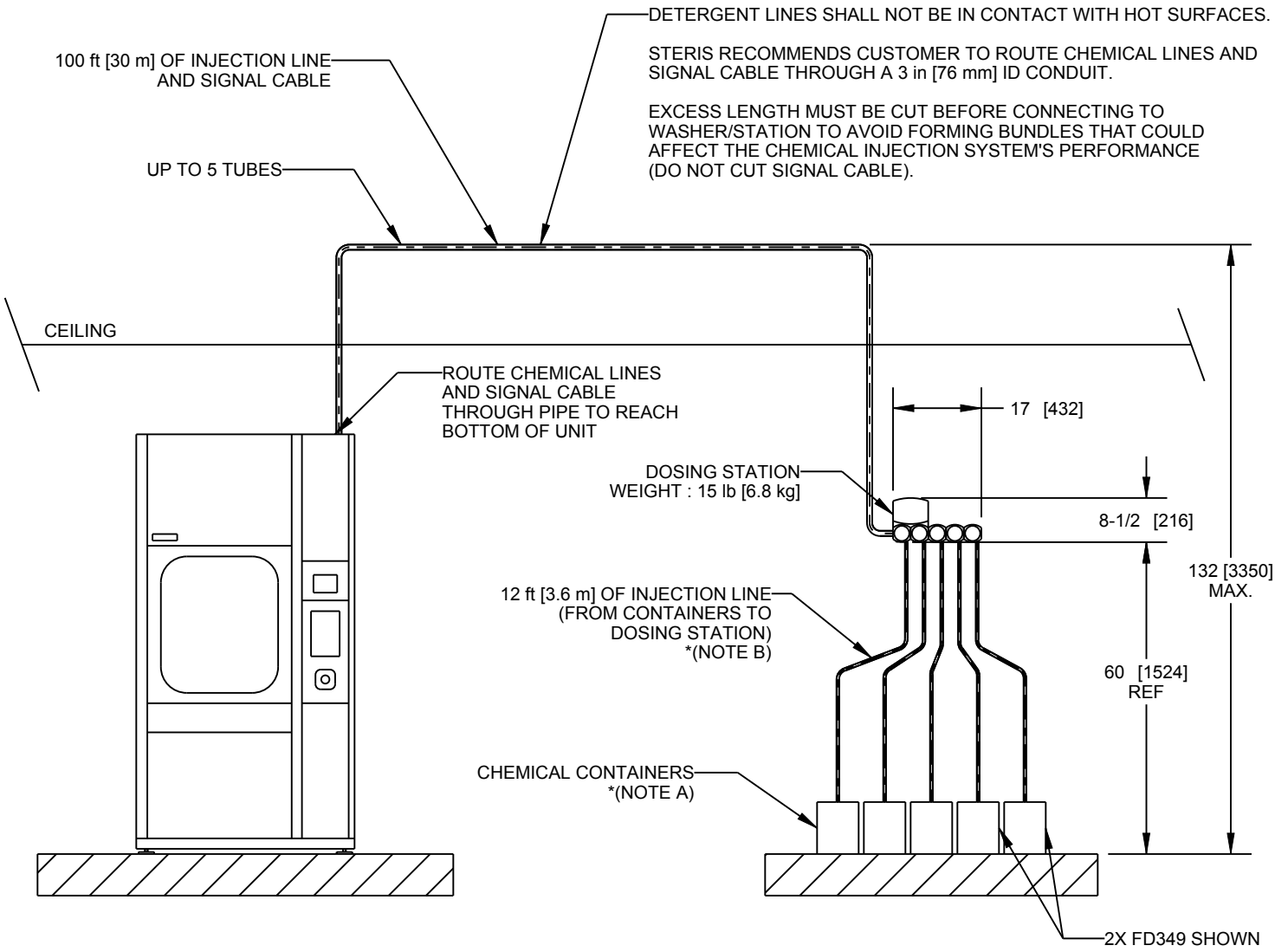
STERIS Corporation

TITLE: EQUIPMENT DRAWING OF
AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR
STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

Released

DOSING STATION



*NOTES:

(A) DOSING STATION AND CHEMICAL CONTAINERS MUST BE ON THE SAME FLOOR OF THE BUILDING AS THE WASHER/DISINFECTOR. CHEMICAL CONTAINER MUST BE LOCATED AT A LOWER HEIGHT THAN DOSING STATION. MAXIMUM CONTAINER INCLINATION IS 15 DEG. FROM FLOOR. AMBIENT TEMPERATURE SHALL NOT EXCEED 32 °C [90 °F]

(B) HP PICKUP TUBE SYSTEM CAN PROVIDE UP TO TWO WASHERS WITH CHEMISTRY FROM THE SAME CONTAINER.

		INSTRUMENT (With PUC HP)	UTENSIL (With PUC HP)
CHEMICAL (CH)	ENZYME CONSUMPTION PER CYCLE (SEE PAGE 7; *(NOTE 4))	0.74 oz [22 ml]	0.74 oz [22 ml]
	DETERGENT CONSUMPTION PER CYCLE (SEE PAGE 7; *(NOTE 4))	0.74 oz [22 ml]	0.74 oz [22 ml]
	LUBRICANT CONSUMPTION PER CYCLE (SEE PAGE 7; *(NOTE 4))	0.2 oz [6 ml]	N/A

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

Released

UTILITY REQUIREMENTS CHART (PLUMBING)

UTILITY	PARAMETER	REQUIREMENT	✓
HOT WATER (HW)	CONNECTION SIZE / TYPE	1/2 in / FEMALE NPT [1/2 in / MALE BSPT]	
	PRESSURE RANGE	15 - 50 psig DYNAMIC [103-345 kPa] MAX. 90 psig STATIC [620 kPA]	
	OPERATING FLOW RATE	6.8 US GPM [25.7 L/min] TO 14.1 US GPM [53.4 L/min]	
	TOTAL CONSUMPTION PER INSTRUMENT CYCLE *(NOTE 4)	3.3 US GAL [12.5 L] WITH ACU-WASH RESERVOIR: 0.0 US GAL [0.0 L]	
	TEMPERATURE RANGE	110 °F [43 °C] TO 150 °F [65.5 °C]	
	WATER QUALITY *(NOTE 5)	HARDNESS (CaCO3) : 50-80 ppm (MAX. 120 ppm)	
COLD WATER (CW) *(NOTES 6)	CONNECTION SIZE / TYPE	1/2 in / FEMALE NPT [1/2 in / MALE BSPT]	
	PRESSURE RANGE	30 - 50 psig DYNAMIC [206-345 kPa] MAX. 90 psig STATIC [620 kPa]	
	OPERATING FLOW RATE	10.7 US GPM [40.5 L/min] TO 14.1 US GPM [53.4 L/min]	
	TOTAL CONSUMPTION PER INSTRUMENT CYCLE *(NOTE 4)	FOR SUMP FILLING: 10.5 US GAL [39.8 L] (ADD THE FOLLOWING CONSUMPTION FOR OPTIONS/CONFIGURATIONS) CONDENSATE RETURN COOL DOWN: 3.4 US GAL [12.9 L] NON-VENTED SYSTEM: 12.4 US GAL [46.9 L] DRAIN COOLDOWN: 18.9 US GAL [71.5 L] DRAIN ACU-COOLDOWN: 13.0 US GAL [49.2 L]	
	TEMPERATURE RANGE	70 °F [21 °C] MAXIMUM	
	WATER QUALITY *(NOTE 5)	HARDNESS (CaCO3) : 50-80 ppm (MAX. 120 ppm)	
PURE WATER (PW)	CONNECTION SIZE / TYPE	1/2 in / FEMALE NPT [1/2 in / MALE BSPT]	
	PRESSURE RANGE	5 - 20 psig DYNAMIC [30 - 138 kPa] MAX. 90 psig STATIC [620 kPa]	
	OPERATING FLOW RATE	5.5 US GPM [21 L/min] TO 10.3 US GPM [39 L/min]	
	TOTAL CONSUMPTION PER INSTRUMENT CYCLE * (NOTE 4)	12.0 US GAL [45.4 L]	
	TEMPERATURE RANGE	70 °F [21.1 °C] TO 150 °F [65.5 °C]	
	RESISTIVITY (CONDUCTIVITY)	0.1-0.5 MΩ -cm (2-10 µS/cm)	
	pH	6.8 - 7.5	

NOTES

1. STERIS REQUIRES TO INSTALL WATER HAMMER ARRESTOR, UNION & PRESSURE GAUGE.

2. CUSTOMER MUST PROVIDE UTILITY CONNECTIONS WITH SHUTOFFS DISCONNECTS WITHIN 2 FEET OF THE PERIMETER OF THE EQUIPMENT AND BELOW THE CEILING DECK.
   *STERIS OFFERS FLEXIBLE HOSES ACCESSORY (FD088 OR FD037) WITH INSTRUCTIONS.

3. SAMPLING VALVES INSTALLATION AS CLOSE AS POSSIBLE TO WASHER WATER CONNECTIONS IS RECOMMENDED.

4. CONSUMPTION BASED ON INSTRUMENT CYCLE WITH PROLYSTICA ULTRA CONCENTRATE HIGH PERFORMANCE CHEMICALS (PUC HP) WITH THE FOLLOWING UTILITY CONDITIONS:

   THREE-LEVEL MANIFOLD RACK
   (CW) COLD WATER PRESSURE: 30 psig DYNAMIC [207 kPa]
   (CW) COLD WATER TEMPERATURE: 70 °F [21 °C]
   (HW) HOT WATER TEMPERATURE: 150 °F [65 °C]
   (PW) PURE WATER TEMPERATURE 70 °F [21 °C]
   (S) STEAM SUPPLY: 80 psig DYNAMIC [552 kPa]

   UTENSIL CYCLE CONSUMPTION:
   TWO-LEVEL MANIFOLD RACK
   CW: 10.4 US GAL [39.4 L]
   HW: 3.2 US GAL [12.1 L]
   PW: 12.0 US GAL [45.4 L]
   S: 6.7 lb [3.0 kg]

5. STERIS RECOMMENDS THE FOLLOWING WATER QUALITY PARAMETERS:
   TOTAL DISSOLVED SOLIDS: 100-200 ppm (MAX. 500 ppm)
   TOTAL ALKALINITY (CaCO3) : 70-120 ppm (MAX. 180 ppm)
   pH : 6.8-7 (MAX. 7.5)
   TOTAL SILICA : 0.1-0.5 ppm (MAX. 1 ppm)

6. BACK FLOW PREVENTER AGAINST BACK SIPHONAGE MAY BE REQUIRED (LOCAL PLUMBING CODE)

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR
STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	

10292218.D

Released

UTILITY REQUIREMENTS CHART (PLUMBING)

UTILITY	PARAMETER	REQUIREMENT	√	NOTES
COMPRESSED AIR (A)	CONNECTION SIZE / TYPE	1/8 in / FEMALE NPT [1/8 in / MALE BSPT]		1. AIR PURITY PER ISO-8573-1: 2010 [7:4:4] MAX. PARTICLE DENSITY: 10 mg/m³ MAX. DEW POINT FOR WATER CONTENT: 37 °F [3 °C] MAX. OIL CONCENTRATION FOR THE OIL CONTENT: 5 mg/m³ 2. STERIS RECOMMENDS A REFRIGERATED AIR DRYER WHERE ENVIRONMENTAL DEW POINT CONDITIONS ARE HIGHER THAN RECOMMENDED. 3. CUSTOMER MUST PROVIDE UTILITY CONNECTIONS WITH SHUTOFFS DISCONNECTS WITHIN 2 FEET OF THE PERIMETER OF THE EQUIPMENT AND BELOW THE CEILING DECK.
	PRESSURE RANGE	MIN 80 psig DYNAMIC [552 kPa] MAX. 125 psig STATIC [860 kPa]		
	OPERATING FLOW RATE	1.75 SCFM [50 L/min]		
DRAIN (D)	FLOOR DRAIN SIZE	MIN 4 in [102 mm] O.D. WITH 8 in x 8 in [204 mm x 204 mm] FLOOR SINK		4. WASHER DRAIN OUTLET SIZE 1-1/2 in / MALE NPT 5. MAX OFFSET OF ± 3/4 in [19 mm] FROM OUTLET (PAGE 3, D). 6. FOR DRAIN REQUIREMENTS WHEN USING SEISMIC MOUNTS, SEE PAGE 2.
	OPERATING FLOW RATE	GRAVITY DRAIN : 50 US GPM [189.3 L/min]		
STEAM INLET (S)	CONNECTION SIZE / TYPE	1/2 in / FEMALE NPT [1/2 in / MALE BSPT]		7. STERIS REQUIRES AT LEAST 97% SATURATED DRY PLANT STEAM, FREE OF DIRT, RESIDUES AND CONTAMINANTS. 8. STERIS RECOMMENDS TO INSTALL A STEAM TRAP AS CLOSE AS POSSIBLE TO UNIT CONNECTION. 9. PROPER OPERATION OF THE WASHER REQUIRES A MINIMUM PRESSURE DIFFERENTIAL OF 21.5 psig [148 kPa] BETWEEN STEAM INLET AND CONDENSATE RETURN. IN CASES OF LOW STEAM INLET PRESSURE, CONDENSATE CAN BE ROUTED TO DRAIN TO INCREASE DIFFERENTIAL. *STERIS OFFERS CONDENSATE RETURN TO DRAIN ACCESSORY (FD353) 10. CUSTOMER MUST PROVIDE UTILITY CONNECTIONS WITH SHUTOFFS DISCONNECTS WITHIN 2 FEET OF THE PERIMETER OF THE EQUIPMENT AND BELOW THE CEILING DECK.
	PRESSURE RANGE	30 - 80 psig DYNAMIC [206-552 kPa] MAX. 90 psig STATIC [620 kPa]		
	OPERATING MASS FLOW RATE	169 lb/h [76.5 kg/h] AT 30 psig [207 kPa] 271 lb/h [123 kg/h AT 80 psig [550 kPa]		
	TOTAL CONSUMPTION PER INSTRUMENT CYCLE (SEE PAGE 7, *(NOTE 4))	6.7 lb [3.0 kg]		
CONDENSATE RETURN (CR)	PRESSURE RANGE	MAX. 8.5 psig [68.9 kPa] BACK PRESSURE (17 ft [5.2 m] ELEVATION)		
	OPERATING FLOW RATE	PEAK : 0.54 US GPM [2.05 L/min]		
	CONNECTION SIZE / TYPE	1/2 in / FEMALE NPT [1/2 in / MALE BSPT]		
CHEMICAL DOSING SYSTEM	CEILING ROUTING CONDUIT	3 in CONDUIT		11. STERIS RECOMMENDS TO ROUTE CHEMICAL LINES AND SIGNAL CABLE THROUGH A 3 in [76 mm] ID CONDUIT (BY OTHERS). 100 ft [30 m] OF INJECTION LINE AND SIGNAL CABLE ARE PROVIDED WITH THE UNIT.

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

Released

UTILITY REQUIREMENTS CHART (ELECTRIC)

UTILITY		PARAMETER AND REQUIREMENT			✓	NOTES
		CONNECTION SIZE/TYPE	NOMINAL AMPERAGE	RECOMMENDED CIRCUIT		
ELECTRICITY (EL)	200-208V 60 Hz, 3-Ph	1 in [27 mm] 1-1/4 in [35 mm] CONDUIT	74 A	100 A		1. ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES. 2. NEUTRAL WIRE NOT REQUIRED. 3. ALWAYS FOLLOW LOCAL ELECTRICAL CODES AND SAFETY-RELATED WORK PRATICES TO DETERMINE THE VALUE OF PROTECTION. 4. WIRING ON THE EQUIPMENT TERMINATES AT A JUNCTION BOX. WIRING BETWEEN JUNCTION BOX AND BUILDING SERVICE LINES ARE NOT SUPPLIED BY STERIS. 5. DISCONNECT SWITCHES WITH OFF POSITION LOCKOUT (SUPPLIED BY OTHERS) MUST BE INSTALLED IN ELECTRIC SUPPLY LINES NEAR THE EQUIPMENT. 6. STERIS RECOMMENDS A LIGHT IN SERVICE AREA.
	200-208V 60 Hz, 3-Ph WITH 40A MIN. CIRCUIT PROTECTION	N/A	N/A	N/A		
	200-208V 50 Hz, 3-Ph	1 in [27 mm] 1-1/4 in [35 mm] CONDUIT	73 A	100 A		
	460-480V 60 Hz, 3-Ph	1 in [27 mm] 1-1/4 in [35 mm] CONDUIT	34.5 A	50 A		
	380-400V 60 Hz, 3-Ph	1 in [27 mm] 1-1/4 in [35 mm] CONDUIT	39.5 A	50 A		
	380-400-415V 50 Hz, 3-Ph	1 in [27 mm] 1-1/4 in [35 mm] CONDUIT	39 A	50 A		
NETWORK (N) OPTIONAL		100/1000 BASE T SUPPORTING TCP/IP PROTOCOL RJ45F CONNECTION				7. NETWORK CONNECTION (IF APPLICABLE) - ACTIVE NETWORK DROP WITH CAT 5/6 CABLE WITHIN 10 ft [3 m] OF UNIT - STATIC OR DHCP RESERVED IP ADDRESS (FOR EACH UNIT) - NETWORK CABLE (SUPPLIED BY OTHER)

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

Released

UTILITY REQUIREMENTS CHART

UTILITY	PARAMETER	REQUIREMENT	✓	NOTES
VENTILATION EXHAUST (EX) OPTIONAL	CONNECTION SIZE	3 in [76 mm] OUTSIDE DIAMETER		1. NOT REQUIRED WITH NON VENTED UNIT. 2. STERIS REQUIRES CORROSION-RESISTANT AND WATER-TIGHT DUCT: - MIN OPERATING TEMPERATURE 210 °F [99 °C] - SLOPED TOWARDS THE WASHER AND NO DEAD LEGS - INSTALL DRAIN PART AT LOWEST POINT NEAR UNIT 3. EXHAUST FAN NORMALLY OPEN-AUXILIARY CONTACTS IS AVAILABLE TO SUPPLY A SIGNAL TO THE FACILITY HVAC CONTROL SYSTEM WHENEVER THE WASHER VENTILATION EXHAUST FAN IS IN OPERATION.
	PRESSURE RANGE	1/2 in [50 mm] VACUUM AT CONNECTION		
	OPERATING FLOW RATE	60 SCFM [1.7 m³/min]		
	TEMPERATURE RANGE	MAX. 240 °F [116 °C]		

PHYSICAL SPECIFICATIONS

SHIPPING DIMENSION W x H x L	50 in x 91 in x 42 in [1270 mm x 2311 mm x 1067 mm]	1. LEVELING FEET ARE PROVIDED FOR PROPER INSTALLATION. 2. PERMISSIBLE ENVIRONMENTAL CONDITIONS. THIS EQUIPMENT IS DESIGNED TO GIVE OPTIMAL RESULTS UNDER THE FOLLOWING CONDITIONS: - INDOOR USE ONLY; - ALTITUDE OF OPERATION UP TO 6562 ft [2000 m]; - TEMPERATURE OF 41 TO 104 °F [5 to 40 °C]; - MAXIMUM RELATIVE HUMIDITY IS 80% FOR TEMPERATURE UP TO 88 °F [31 °C], DECREASING LINEARLY TO 50% RELATIVE HUMIDITY AT 104 °F [40 °C]; - POLLUTION DEGREE 2: EQUIPMENT MUST BE INSTALLED IN AN ENVIRONMENT WHERE NORMALLY ONLY NON-CONDUCTIVE POLLUTION OCCURS BUT WHERE OCCASIONAL, TEMPORARY CONDUCTIVITY CAUSED BY CONDENSATION CAN BE EXPECTED (AS DETERMINED ACCORDING TO INTERNATIONAL STANDARD EN/IEC 61010-1). 3. STERIS ASSUMES NO RESPONSIBILITY FOR CHANGES MADE TO, OR FAILURE TO OBSERVE THE SPECIFICATIONS ON EQUIPMENT DRAWING AND NOTE PAGES. SPECIFICATIONS AND DESCRIPTIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
SHIPPING WEIGHT	1372 lb [622 kg]	
OPERATING DIMENSION W x H x L	42 in x 80.75 in x 32 in [1067 mm x 2051 mm x 813 mm]	
OPERATING WEIGHT (WITH WATER AND FULLY LOADED)	1461 lb [663 kg]	
AVERAGE FLOOR LOAD OVER WASHER FOOTPRINT	1.09 psi [7.49 kPa]	
MAX. FLOOR LOAD AT WASHER FOOT PADS (3 in [76.2 mm] DIAMETER PADS)	75 psi [517 kPa]	
NOISE LEVEL: A-WEIGHTED EQUIVALENT SURFACE SOUND PRESSURE LEVEL	60.6 dB(A) CALCULATED AS DESCRIBED IN ISO 3746.	
OPENING AREA FROM CLEAN SIDE TO SOILED SIDE	46.5 in² [300 cm²] *(NOTE 4)	4. OPENING AREA CAN BE REDUCED TO 13 in² [84 cm²] WITH INSTALLATION OF AIR MANAGEMENT PANELS ACCESSORY (FD352)
CHAMBER DIMENSION W x H x L VOLUME	26.5 in x 26.25 in x 25.5 in [673 mm x 667 mm x 648 mm] 10.3 ft³ [0.29 m³]	

TYPICAL HEAT LOSS AT 75 °F [24 °C] CONTINUOUS OPERATION

	NON-VENTED UNIT WITH ACU-RINSE RES.	VENTED UNIT (OPTIONAL) WITH ACU-RINSE RES.
CLEAN SIDE	2049 Btu/h [600 W]	2049 Btu/h [600 W]
SOILED SIDE	8265 Btu/h [2420 W]	6455 Btu/h [1890 W]
TOTAL	10314± 854 Btu/h [3020 ± 250 W]	8504 ± 854 Btu/h [2490 ± 250 W]

VALUES INCLUDE HEAT LOSS DURING DOOR OPENING FOR LOADING AND UNLOADING OPERATIONS. "TOTAL" WILL VARY DEPENDING ON DISINFECTION TIME AND TEMPERATURE, DRYING TIME AND TEMPERATURE AND USE RATE OF UNIT.
AN ADDITIONAL HEAT LOSS FOR LOAD COOL DOWN IN CLEAN SIDE CAN BE ADDED TO THE TOTAL HEAT LOSS OF THE WASHER: MAXIMUM 1713 Btu [1807 kJ]

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO® 7052HP SINGLE-CHAMBER WASHER/DISINFECTOR
STEAM HEATED, W/ ACU-RINSE RES., UNIT FLUSH TO WALL

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Jean Tanguay	10292218	10292218.D

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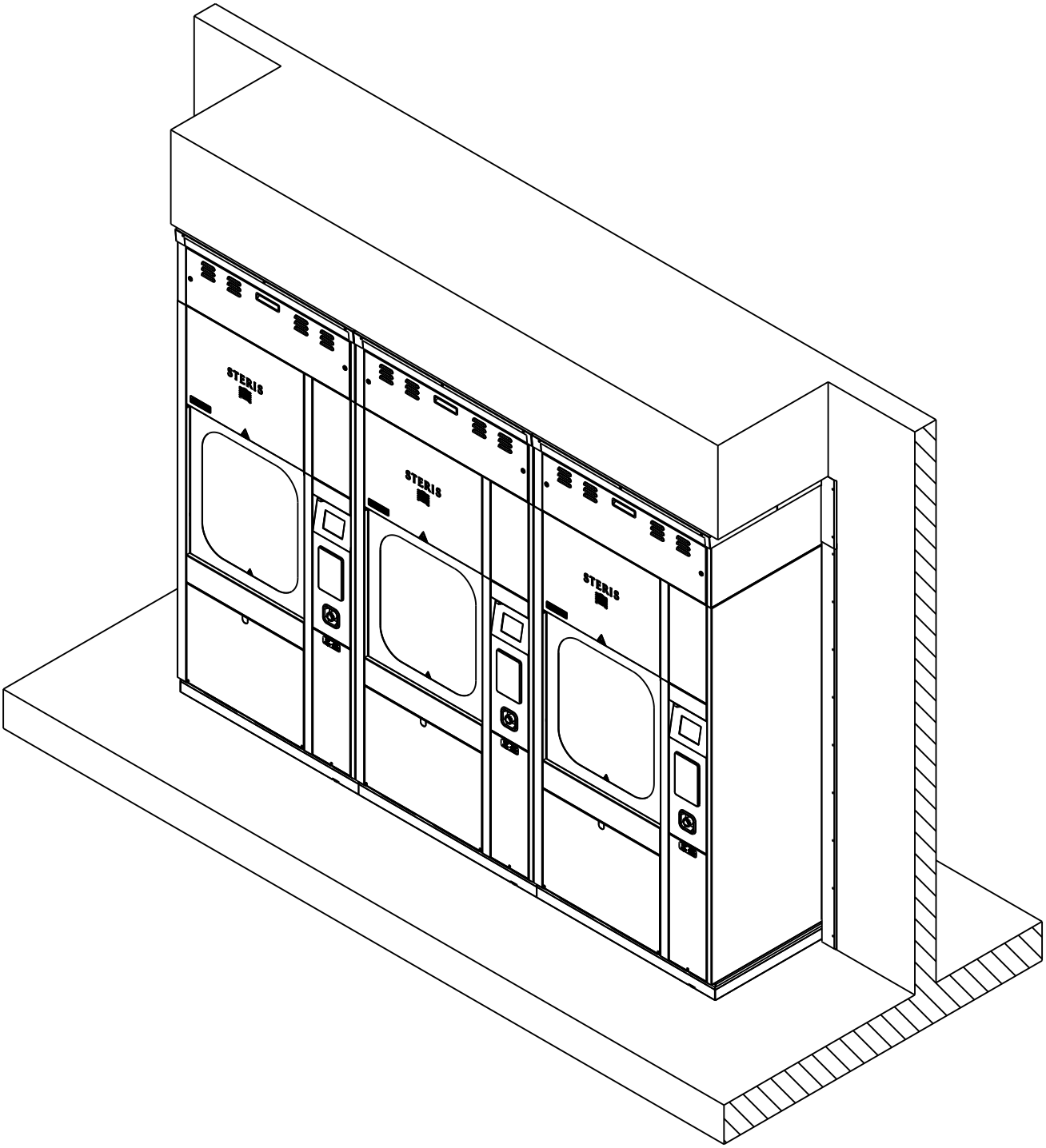
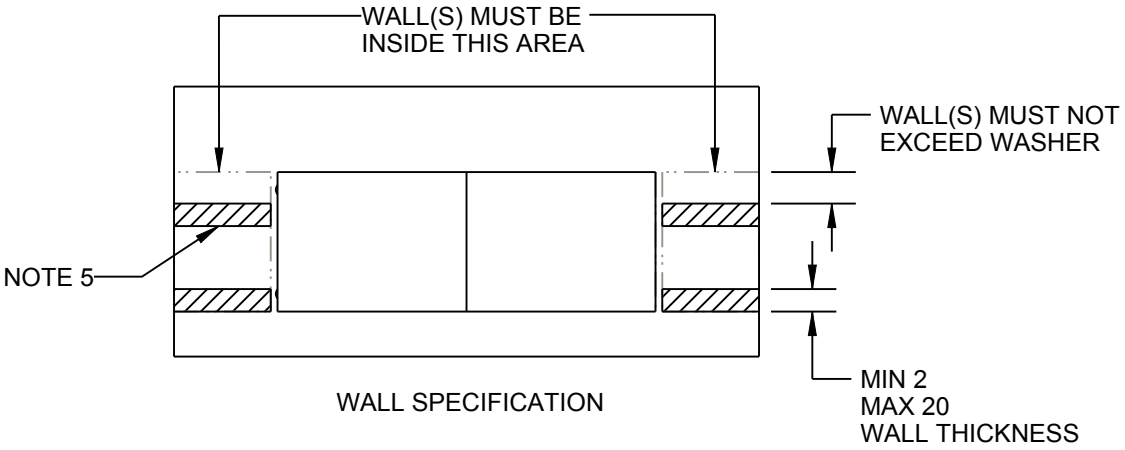


STERIS Corporation

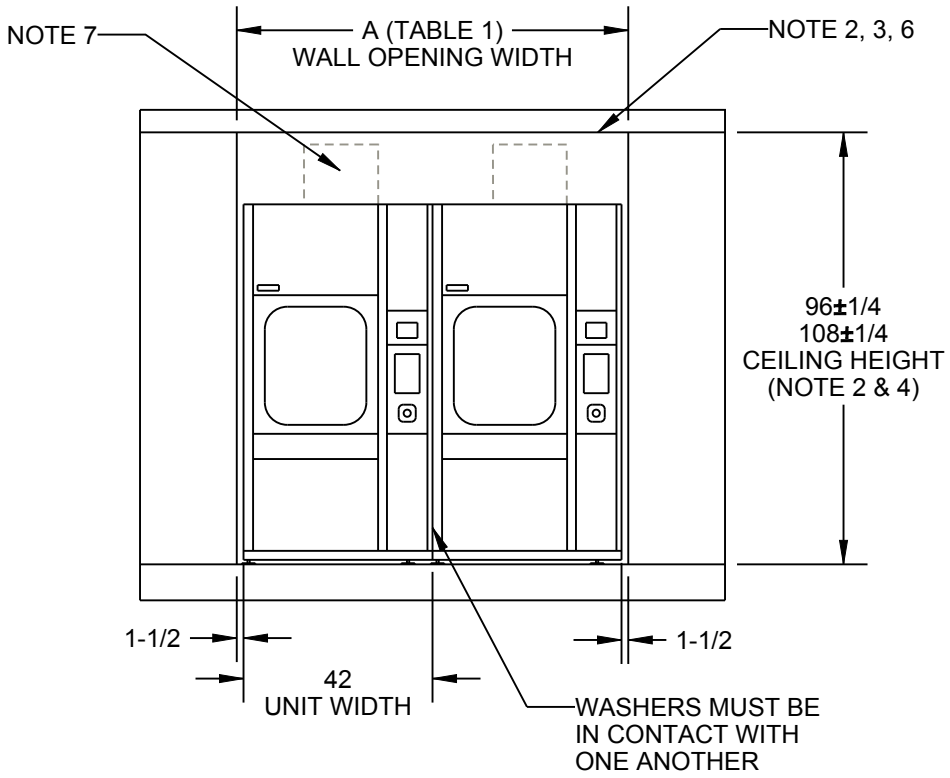
TITLE: EQUIPMENT DRAWING OF AMSCO AIR MANAGEMENT SYSTEM

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Lloyd Dupuis	10726323	10726323.A

Released



WALL SPECIFICATION



NOTES:

1- UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES
2- WALL OPENING HEIGHT MUST BE EQUAL TO CEILING HEIGHT.
3- CEILING MUST HAVE AN EVEN HEIGHT TO ALLOW INSTALLATION.
4- IF CEILING HEIGHT IS DIFFERENT THEN CEILING HEIGHT MENTIONED, CUSTOMER SHALL BUILD A SOFFIT TO ATTAIN ONE OF THE SPECIFIED HEIGHTS.(SEE PAGE 3)
5- CAN BE INSTALLED WITH SINGLE OR DOUBLE WALL.
6- CEILING OR SOFFIT MUST BE OF MATERIAL TO ALLOW FASTENER TO BE INSTALLED.
7- UTILITIES MUST COME FROM THE TOP OF WASHER.

TABLE 1

NUMBER OF WASHERS	DIMENSION A
1	45"
2	87"
3	129"
4	171"

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO AIR MANAGEMENT SYSTEM

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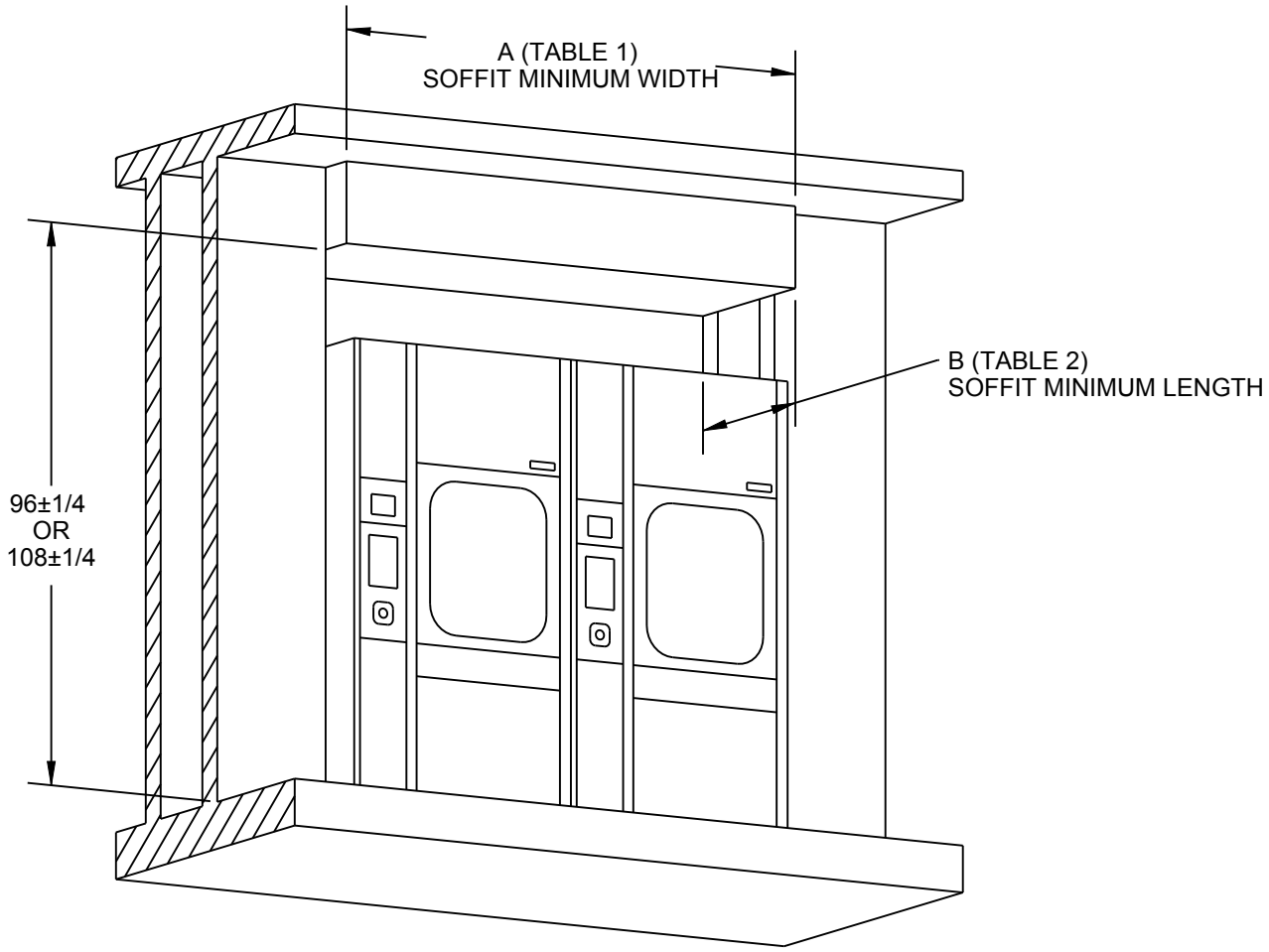
A	N/A	Lloyd Dupuis	10726323	10726323.A

Released



SOFFIT SPECIFICATION (PAGE 2, NOTE 4)

TABLE 1	
NUMBER OF WASHERS	**DIMENSION A**
1	45"
2	87"
3	129"
4	171"

TABLE 2	
WASHER	**DIMENSION B**
3052/5052	31"
VSC/7052HP	32"
7053L/7053HP	38"

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO AIR MANAGEMENT SYSTEM

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EQUIPMENT LIST

WASHER MODEL	NUMBER OF WASHER	CEILING HEIGHT (IN)	OPENING AREA FROM CLEAN SIDE TO SOILED SIDE (IN^2)	SHIPPING DIMENSION (IN)	SHIPPING WEIGHT (lbs)	EQUIPMENT NUMBER
3052/5052	1	96	36.8	48 x 37-1/8 x 14-1/8	70	FD448101
3052/5052	2	96	71.5	48 x 37-1/8 x 28-1/4	120	FD448102
3052/5052	3	96	106.3	48 x 37-1/8 x 42-3/8	170	FD448103
3052/5052	4	96	141.1	48 x 37-1/8 x 56-1/2	220	FD448104
3052/5052	1	108	36.4	48 x 37-1/8 x 14-1/8	90	FD448105
3052/5052	2	108	70.7	48 x 37-1/8 x 28-1/4	160	FD448106
3052/5052	3	108	105.0	48 x 37-1/8 x 42-3/8	230	FD448107
3052/5052	4	108	139.2	48 x 37-1/8 x 56-1/2	300	FD448108
7053L/7053HP	1	96	36.1	48 x 37-1/8 x 14-1/8	73	FD448109
7053L/7053HP	2	96	70.2	48 x 37-1/8 x 28-1/4	126	FD448110
7053L/7053HP	3	96	104.3	48 x 37-1/8 x 42-3/8	179	FD448111
7053L/7053HP	4	96	138.4	48 x 37-1/8 x 56-1/2	232	FD448112
7053L/7053HP	1	108	36.3	48 x 37-1/8 x 14-1/8	95	FD448113
7053L/7053HP	2	108	70.4	48 x 37-1/8 x 28-1/4	170	FD448114
7053L/7053HP	3	108	104.5	48 x 37-1/8 x 42-3/8	245	FD448115
7053L/7053HP	4	108	138.6	48 x 37-1/8 x 56-1/2	320	FD448116
VSC/7052HP	1	96	34.7	48 x 37-1/8 x 14-1/8	71	FD448117
VSC/7052HP	2	96	67.4	48 x 37-1/8 x 28-1/4	122	FD448118
VSC/7052HP	3	96	100.1	48 x 37-1/8 x 42-3/8	173	FD448119
VSC/7052HP	4	96	132.8	48 x 37-1/8 x 56-1/2	224	FD448120
VSC/7052HP	1	108	34.9	48 x 37-1/8 x 14-1/8	92	FD448121
VSC/7052HP	2	108	67.6	48 x 37-1/8 x 28-1/4	164	FD448122
VSC/7052HP	3	108	100.3	48 x 37-1/8 x 42-3/8	236	FD448123
VSC/7052HP	4	108	133.0	48 x 37-1/8 x 56-1/2	308	FD448124

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF AMSCO AIR MANAGEMENT SYSTEM

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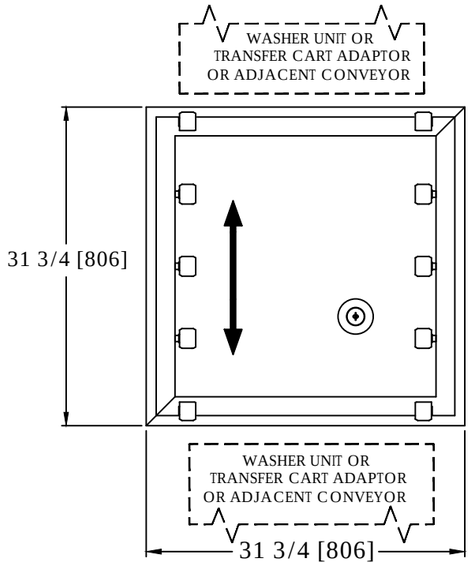
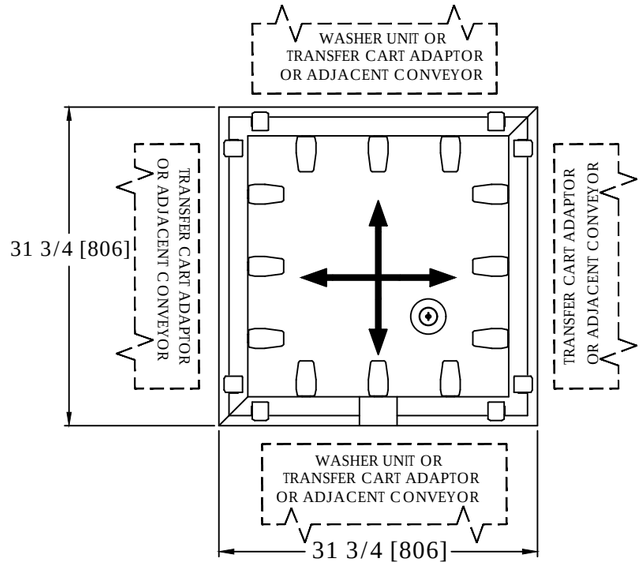
A	N/A	Lloyd Dupuis	10726323	10726323.A



NON-MOTORIZED CONVEYORS

(SCS-B, SCS-LE)

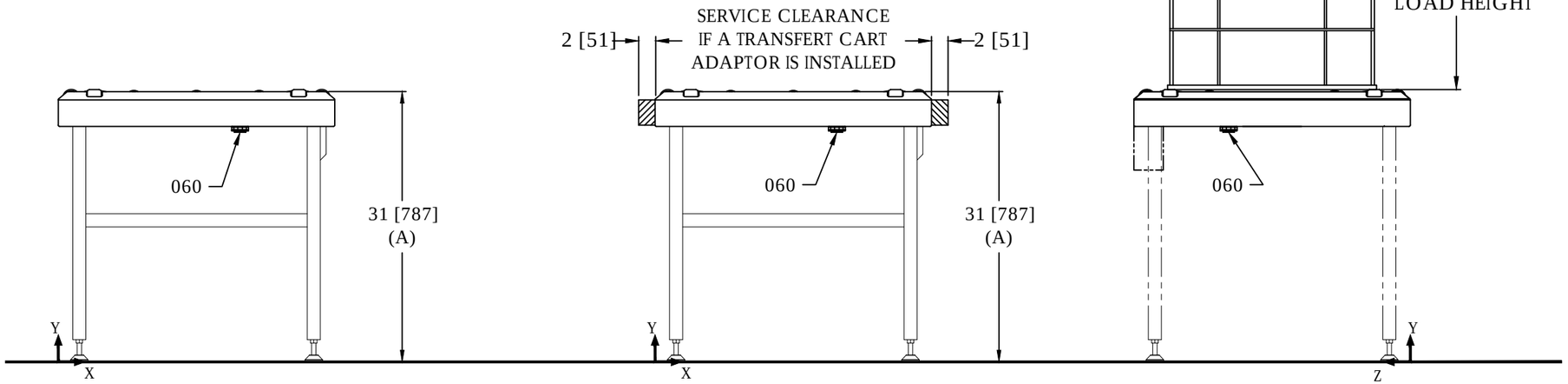


NON-MOTORIZED
2-WAY CONVEYORS

(SCS-2W, SCS-2W-LE)

INTERFACE LEGEND	
060	- DRAIN CONNECTION

CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
060	20 7/8 [530]	26 3/8 [670]	20 7/8 [530]



WHEN INSTALLING WASHING EQUIPMENT AND SCS MODULES IN CLOSED LOOP CONFIGURATION, MAXIMUM ROOM FLOOR SLOPE MUST NOT EXCEED 1 3/8 INCHES.*

*FOR ROOM FLOOR SLOPE EXCEEDING 1 3/8 INCHES, PLEASE CONTACT STERIS ENGINEERING.

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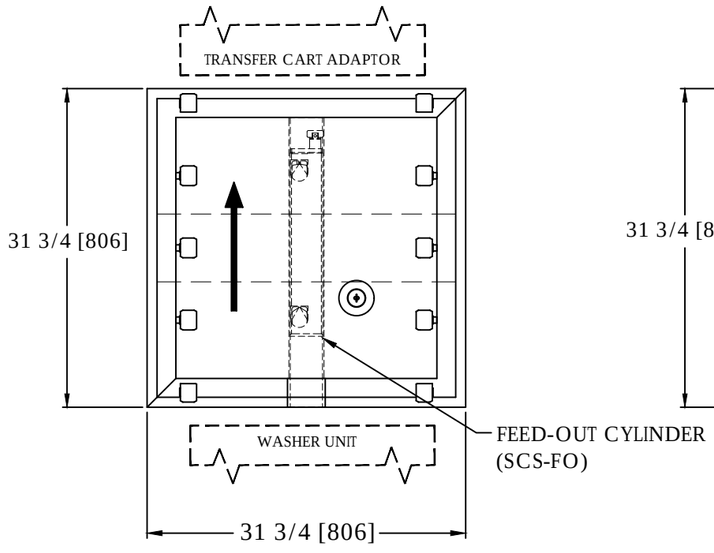
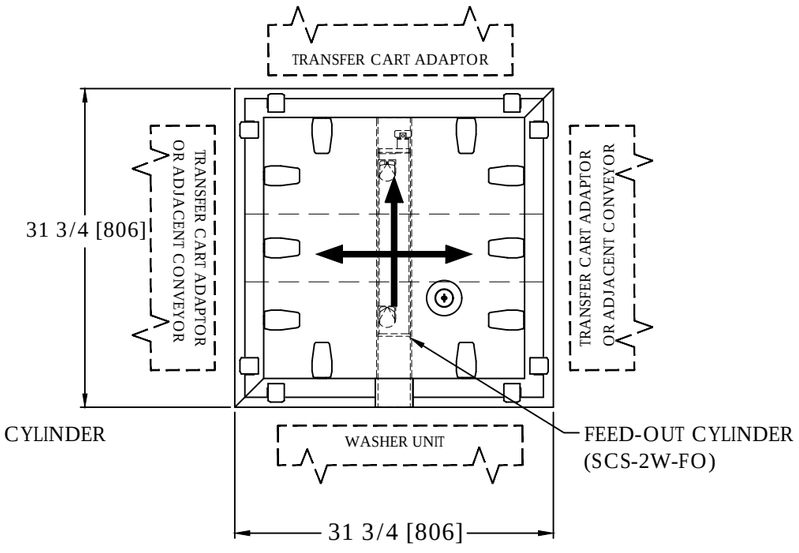
STERIS Canada Corporation

TITLE: SCS CONVEYOR SYSTEM
NON-MOTORIZED CONVEYORS
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C



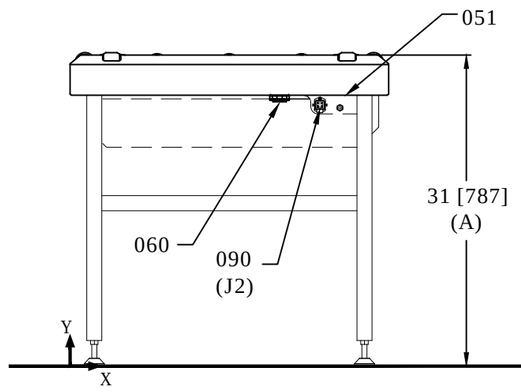
NON-MOTORIZED
FEED-OUT CONVEYORS
(SCS-FO)

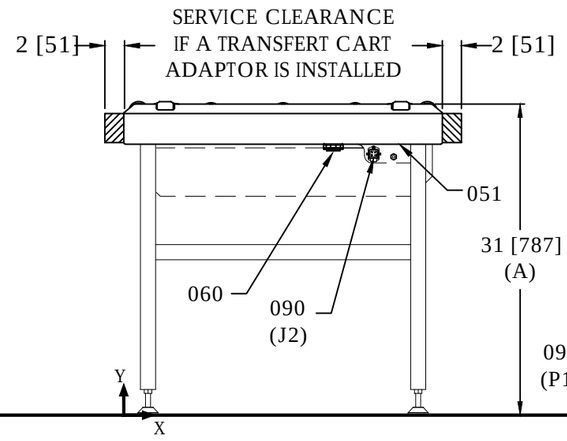


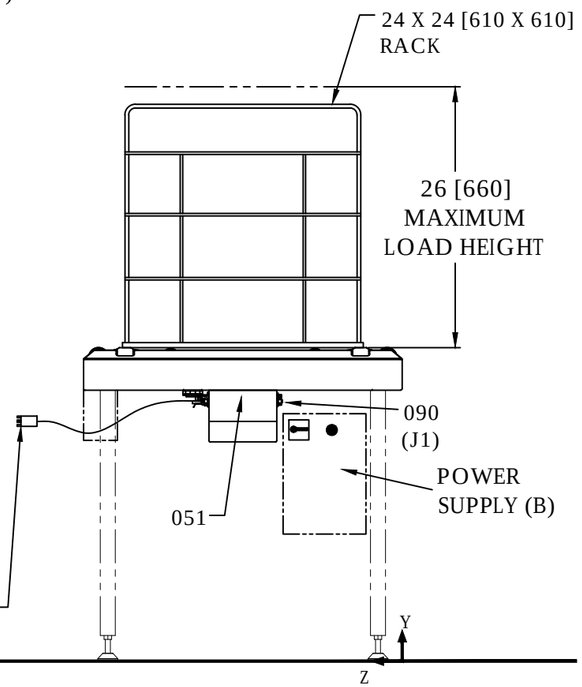
NON-MOTORIZED 2-WAY
FEED-OUT CONVEYORS
(SCS-2W-FO)

INTERFACE LEGEND	
051	- AIR (IF FEED-OUT FEATURE)
060	- DRAIN CONNECTION
090	- ELECTRICAL SUPPLY DC RECEPTACLE :J2
	- COMMUNICATION RECEPTACLE: J1 (N/A)
	- COMMUNICATION PLUG: P1 (FOR UPSTREAM WASHER CONNECTION)
~	PHASE

CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
051	27 1/2 [699]	27 [686]	16 [406]
060	20 7/8 [530]	26 3/8 [670]	20 7/8 [530]







STERIS®

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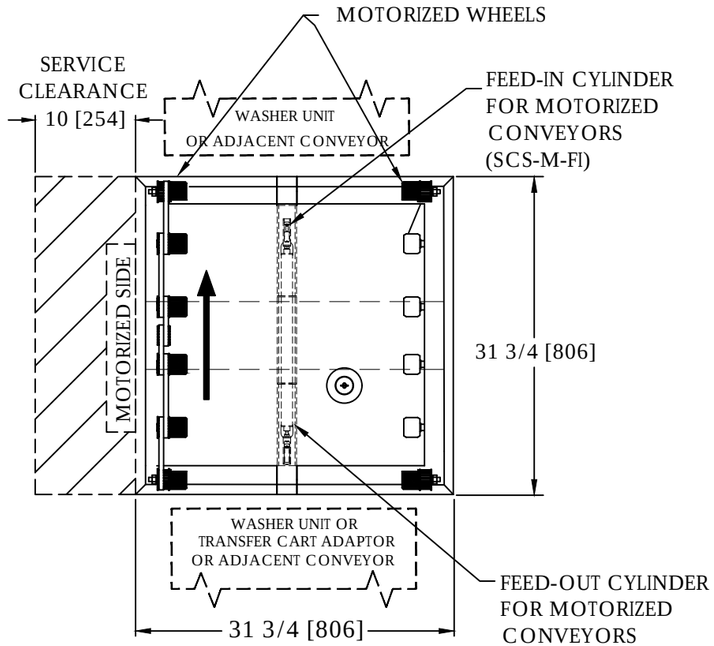
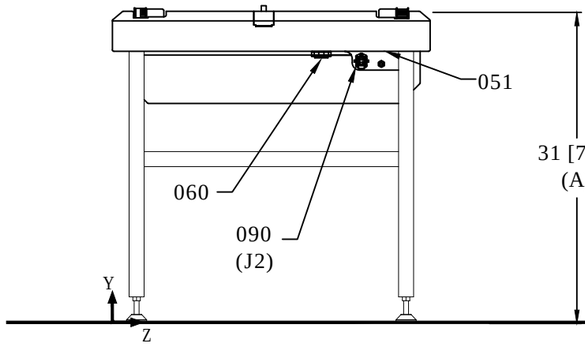
TITLE: SCS CONVEYOR SYSTEM
NON-MOTORIZED FEED-OUT CONVEYORS
DOMESTIC

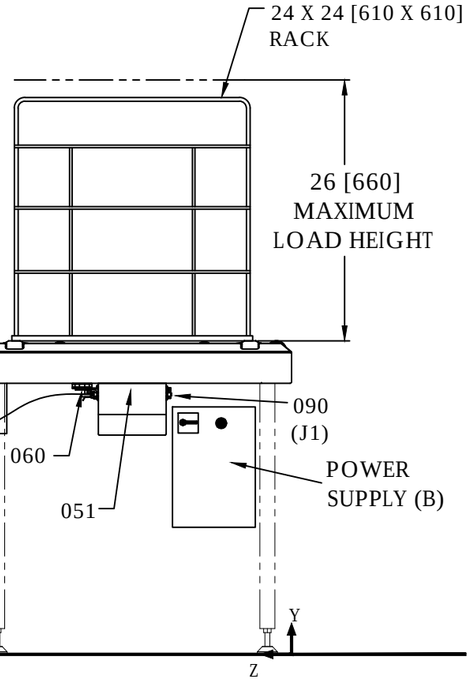
DWN. Christine Fortier | Drawing Number 920506414.C



MOTORIZED CONVEYOR

(SCS-BM, SCS-M-FI, SCS-M-FO)





INTERFACE LEGEND	
051	- AIR (IF FEED-OUT/ FEED-IN FEATURE)
060	- DRAIN CONNECTION
090	- ELECTRICAL SUPPLY DC RECEPTACLE :J2
	- COMMUNICATION RECEPTACLE: J1 (FOR DOWNSTREAM CONVEYOR/WASHER CONNECTION)
	- COMMUNICATION PLUG: P1 (FOR UPSTREAM CONVEYOR/WASHER CONNECTION)
~	PHASE

CONNECTION POSITION WITH REFERENCE POINT

	SCS		
	X	Y	Z
051	27 1/2 [699]	27 [686]	16 [406]
060	20 7/8 [530]	26 3/8 [670]	20 7/8 [530]

STERIS

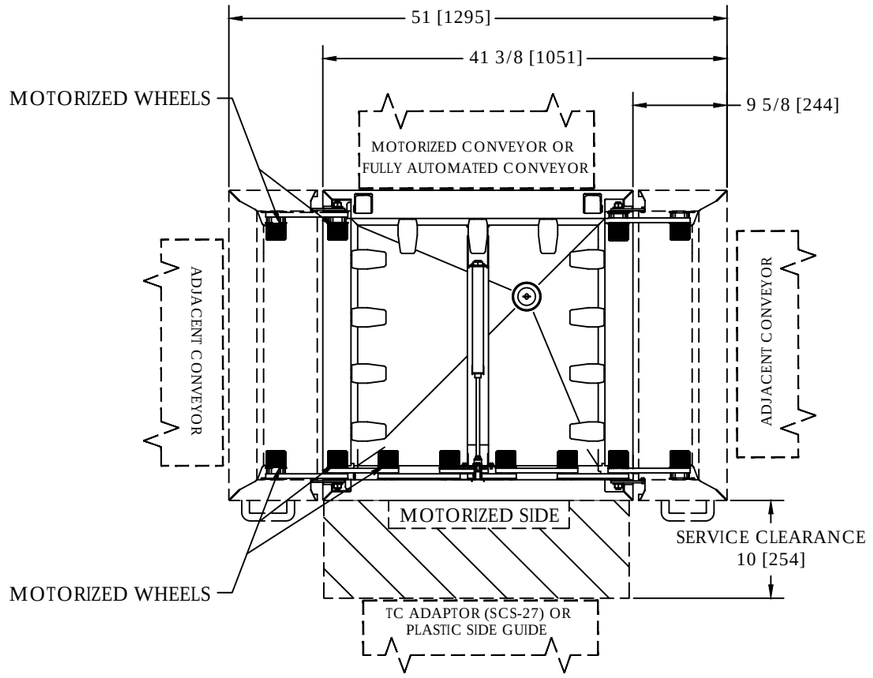
STERIS Canada Corporation

TITLE: SCS CONVEYOR SYSTEM
MOTORIZED CONVEYORS
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C

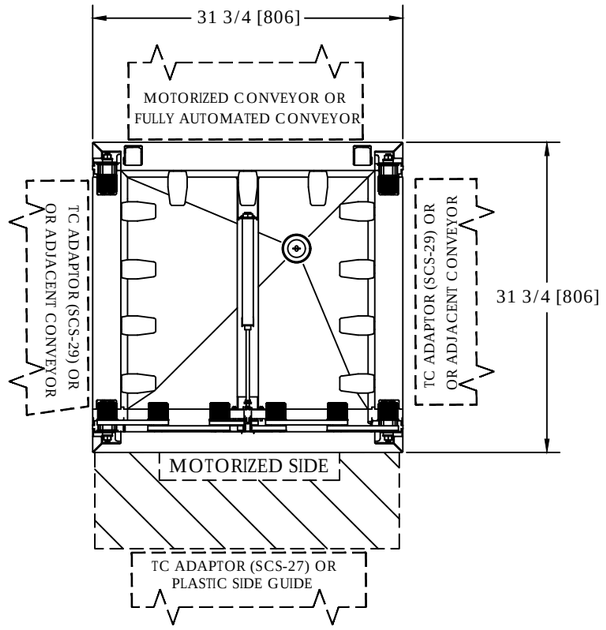
INTERFACE LEGEND	
051	- AIR
060	- DRAIN CONNECTION
090	- ELECTRICAL SUPPLY DC RECEPTACLE :J2
	- COMMUNICATION RECEPTACLE: J1 (PUSH) (FOR CONVEYOR RECEIVING RACK BY CYLINDER)
	- COMMUNICATION RECEPTACLE: J1 (FOR CONVEYOR RECEIVING RACK BY MOTORIZED WHEELS)
	- COMMUNICATION PLUG: P1 (FOR UPSTREAM CONVEYOR CONNECTION)

CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
051	29 1/2 [750]	26 3/4 [680]	15 7/8 [405]
060	20 7/8 [530]	25 3/4 [655]	20 7/8 [530]



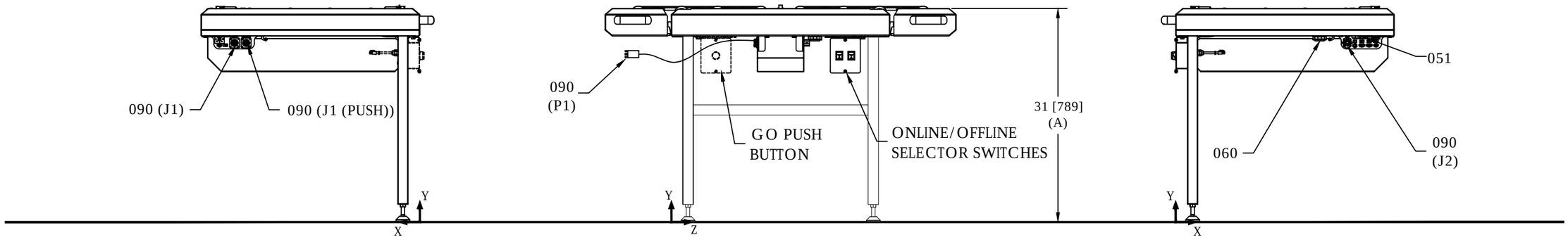
FULLY AUTOMATED CONVEYOR WITH LIFT GATE

(SCS-FA-L-ULG, SCS-FA-L-DLG, SCS-FA-L-2LG, SCS-FA-R-ULG, SCS-FA-R-DLG, SCS-FA-R-2LG)



FULLY AUTOMATED CONVEYOR

(SCS-FA-L, SCS-FA-R)



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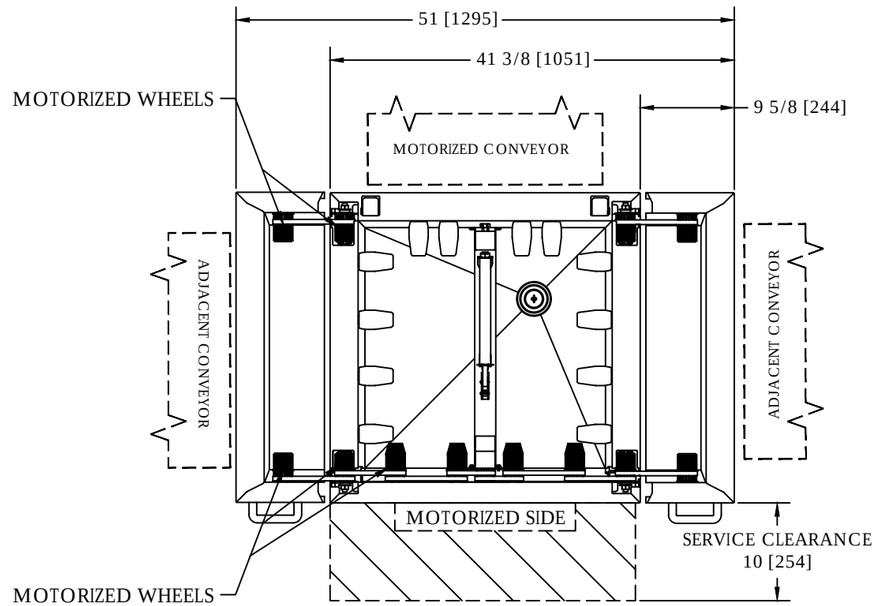
TITLE: SCS CONVEYOR SYSTEM
FULLY AUTOMATED CONVEYORS
DOMESTIC

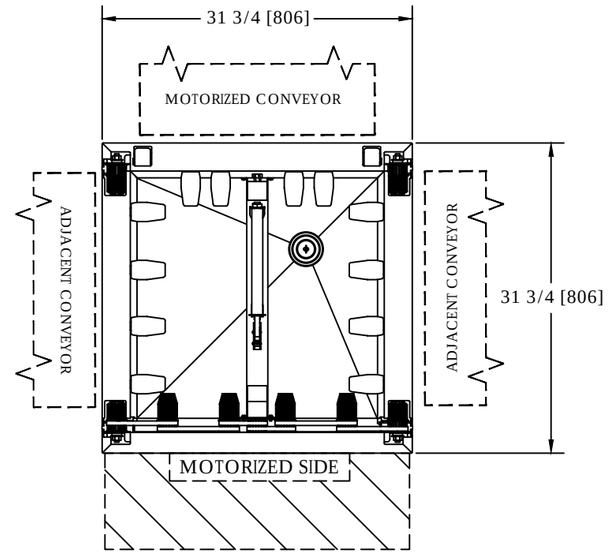
DWN. Christine Fortier | Drawing Number 920506414.C

Released

INTERFACE LEGEND	
051	- AIR
060	- DRAIN CONNECTION
090	- ELECTRICAL SUPPLY DC RECEPTACLE :J2
	- COMMUNICATION RECEPTACLE: J1
	- COMMUNICATION PLUG: P1 ROLL (RECEIVING RACK FROM MAIN FLOW UPSTREAM CONVEYOR)
	- COMMUNICATION PLUG: P1 (RECEIVING RACK FROM WASHER'S FLOW UPSTREAM CONVEYOR)

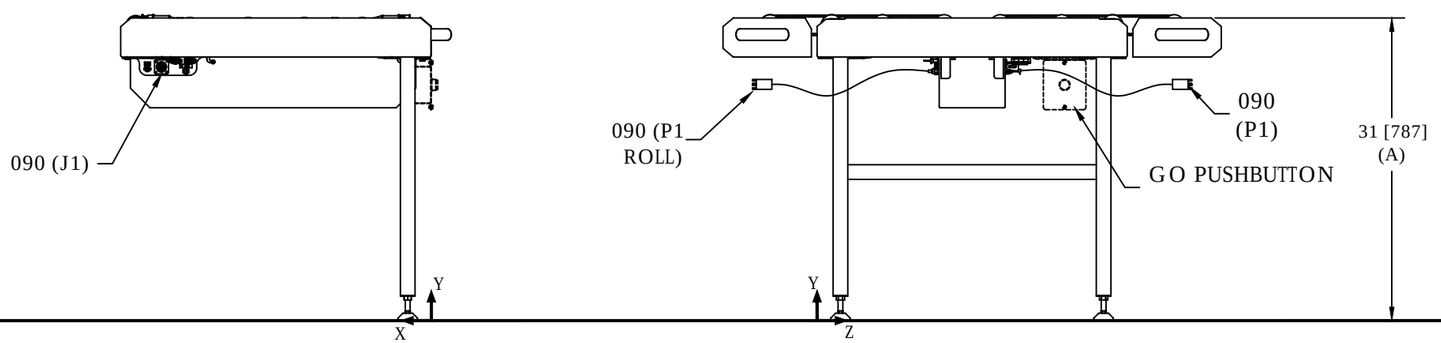
CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
051	27 3/4 [705]	27 [686]	15 7/8 [405]
060	20 7/8 [530]	25 3/4 [655]	20 7/8 [530]





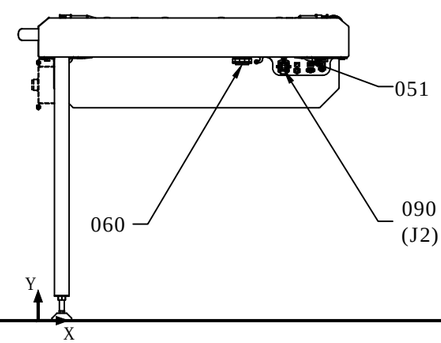
FULLY AUTOMATED UNLOAD CONVEYOR WITH LIFT GATE

(SCS-FAU-L-ULG, SCS-FAU-L-DLG, SCS-FAU-L-2LG, SCS-FAU-R-ULG, SCS-FAU-R-DLG, SCS-FAU-R-2LG)



FULLY AUTOMATED UNLOAD CONVEYOR

(SCS-FAU-L, SCS-FAU-R)



STERIS

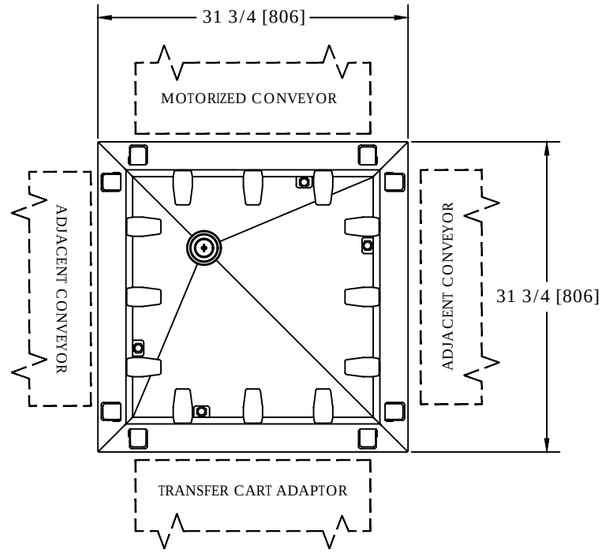
STERIS Canada Corporation

TITLE: SCS CONVEYOR SYSTEM
FULLY AUTOMATED UNLOAD CONVEYORS
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C

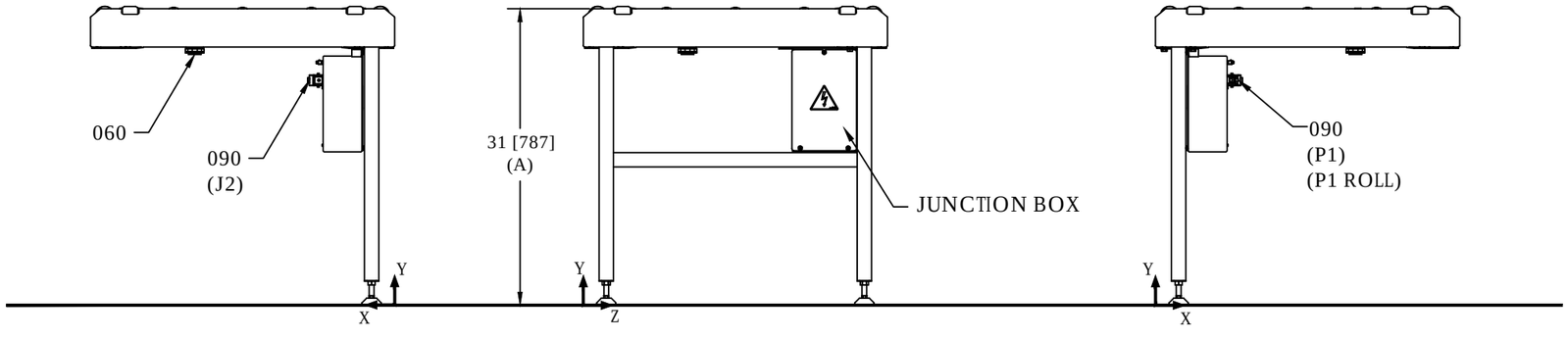
INTERFACE LEGEND	
060	- DRAIN CONNECTION
090	- ELECTRICAL SUPPLY DC RECEPTACLE :J2
	- COMMUNICATION PLUG: P1 ROLL (RECEIVING RACK FROM MAIN FLOW UPSTREAM CONVEYOR)
	- COMMUNICATION PLUG: P1 (RECEIVING RACK FROM WASHER'S FLOW UPSTREAM CONVEYOR)

CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
060	20 7/8 [530]	25 3/4 [655]	10 7/8 [530]



FULLY AUTOMATED UNLOAD
LINE END CONVEYOR

(SCS-FAU-LE)



STERIS

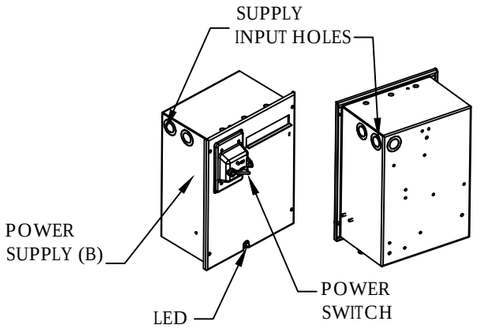
STERIS Canada Corporation

TITLE: SCS CONVEYOR SYSTEM
FULLY AUTOMATED UNLOAD LINE END CONVEYOR
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C

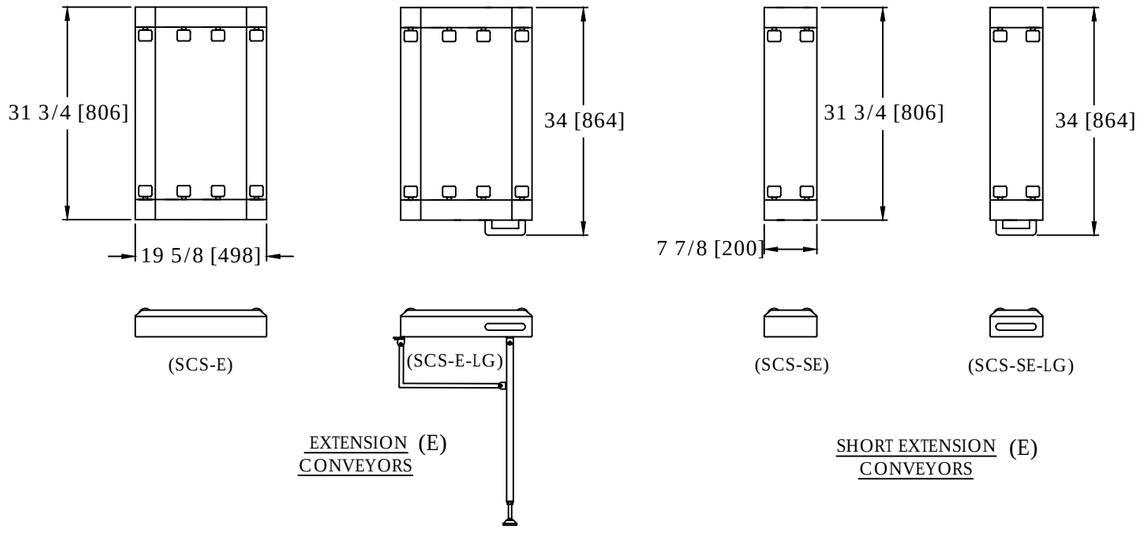
UTILITY REQUIREMENTS CHART

	DESCRIPTION	CONNECTION TYPE	CONNECTION SIZE	PRESSURE RANGE (DYNAMIC)	OPERATING CONSUMPTION
051	AIR (C) (Connected to washer supply)	Pneumatic Coupling	5/32 [4]	SAME AS WASHER (80 DYNAMIC TO 125 STATIC PSIG [550-860 kPa])	(1 SCFM [1.8 M³/H])
060	DRAIN (D)	MALE	1 1/2 [38]		
090	ELECTRICAL (See Power Supply table)	CONDUIT	1/2 [13]		
	SHIPPING DIMENSION W x H x L AND WEIGHT				36"[914] X 13"[330] X 35 1/2"[902] 88 Lbs [40Kg]
	MAXIMUM WEIGHT FOR ONE MODULE AND ITS LOAD				225 LB [102 Kg]



POWER SUPPLY INFORMATION CHART

Supply box Input (Main) Voltage	Customer Supply wires	Frequency	Required Protection
120Vac (1~) (F)	L+N+PE	60 Hz	15 A
200-240Vac (1~)	L+L+PE	60 Hz	
200-240Vac (1~)	L+N+PE	50 Hz	
200-480Vac (3~)	L+L+PE	50/60 Hz	
380-480Vac (3~)	L+N+PE	50/60 Hz	
OUTPUT VOLTAGE		24V DC	
MAX. CAPACITY PER POWER SUPPLY (G)		4 POWERED CONVEYORS	
MAX. CAPACITY PER CIRCUIT DISCONNECT SWITCH	120V (F)	2 POWER SUPPLIES	
	200V +	4 POWER SUPPLIES	



NOTES:

(A) HEIGHT IS ADJUSTABLE FROM 29" [737] TO 33" [838] .

(B) POWER SUPPLY SHOULD BE PLACED UNDERNEATH CONVEYOR. EXACT POSITION MUST BE SPECIFIED ON THE LAYOUT. A DISCONNECT SWITCH MUST BE INSTALLED ON THE ELECTRICAL LINE.

(C) A TEE ADAPTOR IS PROVIDED BY STERIS.

(D) A DRAIN CONNECTION KIT FOR UP TO 4 CONVEYORS IS AVAILABLE AS AN ACCESSORY (SCS-10).

(E) EXTENSION CONVEYORS ARE ALWAYS ATTACHED TO CONVEYORS.

(F) FOR 120 VAC INPUT VOLTAGE, A DIP SWITCH MUST BE SET TO THE 120 VOLTS POSITION IN THE POWER SUPPLY BOX.

(G) A MAXIMUM OF 4 POWERED CONVEYORS (MOTORIZED CONVEYORS AND NON-MOTORIZED CONVEYORS WITH FEED-OUT) PER POWER SUPPLY. EACH CONVEYOR IS INDIVIDUALLY CONNECTED (IN PARALLEL).

SCS-LE OR SCS-2W-LE CONVEYORS SHOULD NOT BE CONSIDERED AS POWERED BECAUSE THEY ARE NOT CONNECTED TO A POWER SUPPLY. THESE CONVEYORS ARE POWERED BY BEING CONNECTED TO THE UPSTREAM MOTORIZED CONVEYOR.

DISCONNECT SWITCHES ARE NOT PROVIDED BY STERIS.

GENERAL NOTES:

1. CUSTOMER MUST BE SURE THAT MACHINE STANDS ON A NON-COMBUSTIBLE FLOOR.
2. ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES.
3. MAIN SUPPLY MUST BE PERMANENTLY CONNECTED.

STERIS

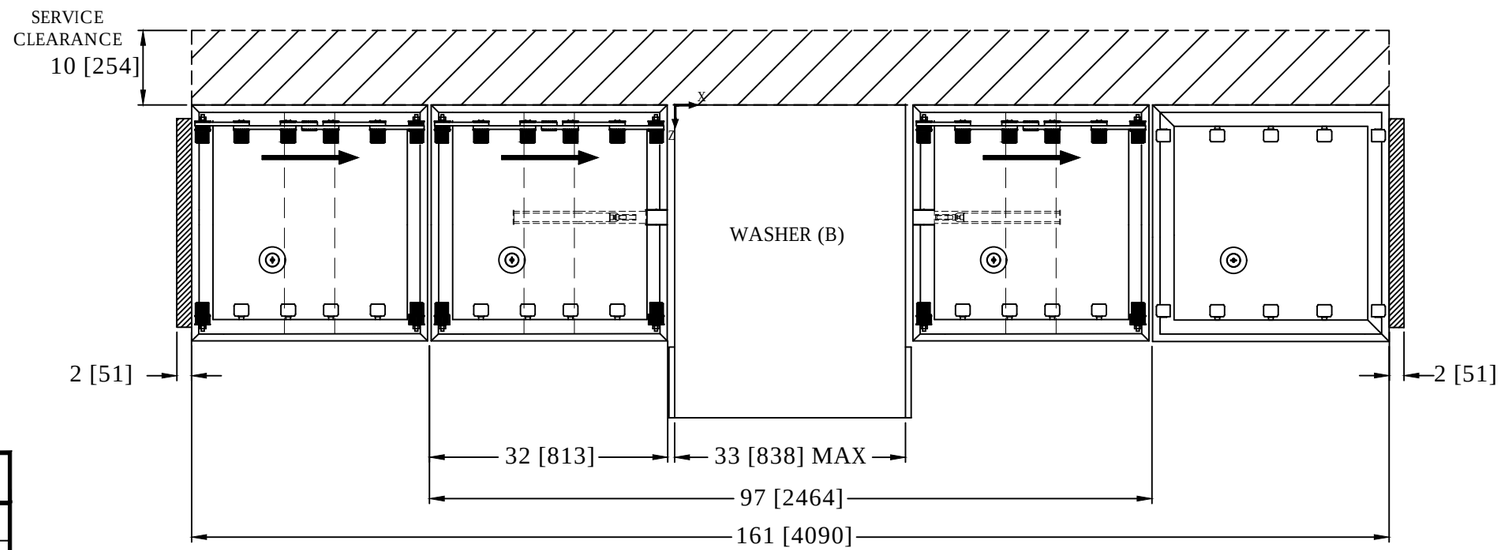
STERIS Canada Corporation

TITLE: SCS CONVEYOR SYSTEM EXTENSION CONVEYORS DOMESTIC

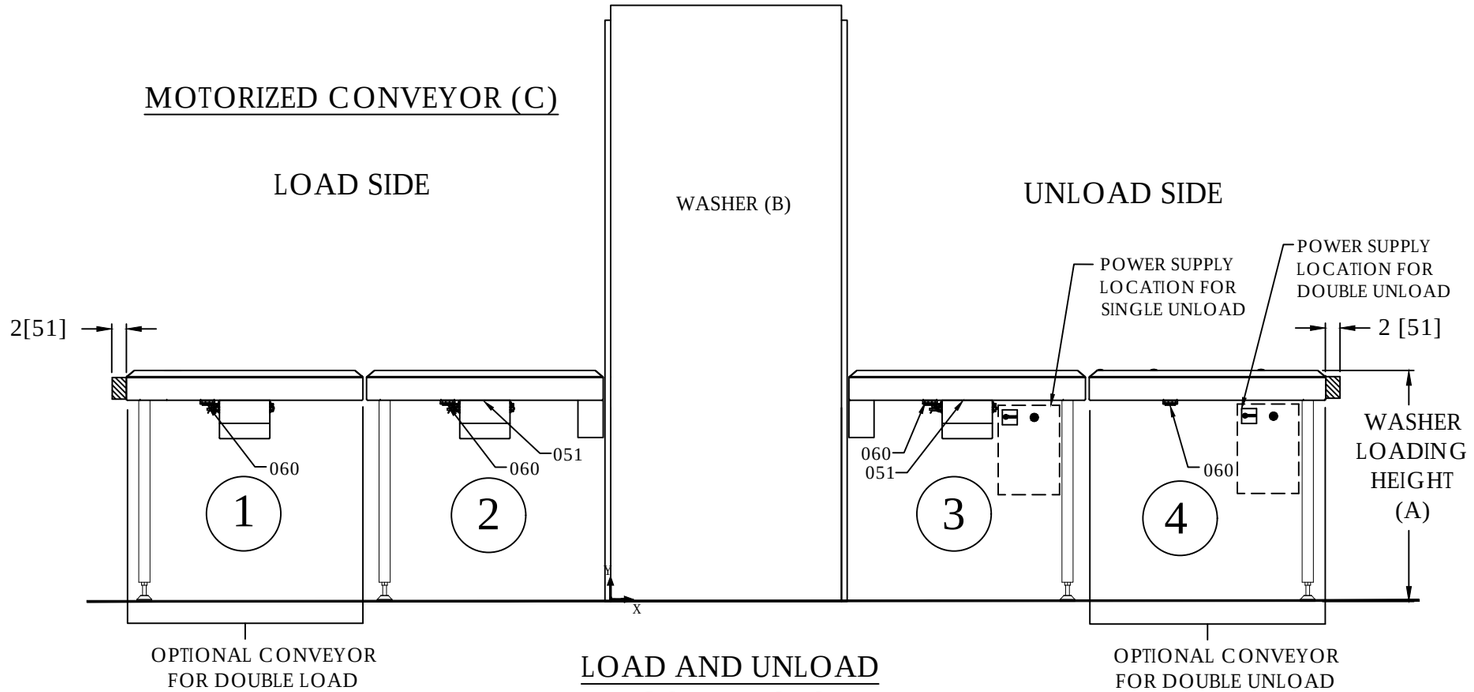
DWN. Christine Fortier | Drawing Number 920506414.C

INTERFACE LEGEND	
060	- DRAIN CONNECTION
051	- AIR (IF FEED-IN/OUT FEATURE)

CONNECTION POSITION WITH REFERENCE POINT				
	SCS			
	#	X	Y	Z
060	1	-54 [-1372]	25 3/4 [655]	21 [533]
	2	-22 [-559]	25 3/4 [655]	21 [533]
	3	43 [1092]	25 3/4 [655]	21 [533]
	4	75 [1905]	25 3/4 [655]	21 [533]
051	2	-17 [-432]	26 3/4 [680]	29 [737]
	3	48 [1219]	26 3/4 [680]	29 [737]



MOTORIZED CONVEYOR (C)



LOAD AND UNLOAD CONVEYORS

(A) HEIGHT IS ADJUSTABLE FROM 29 3/4" [756] TO 32 1/4" [819].

(B) REFER TO WASHER'S EQUIPMENT DRAWING FOR DIMENSION DETAILS.

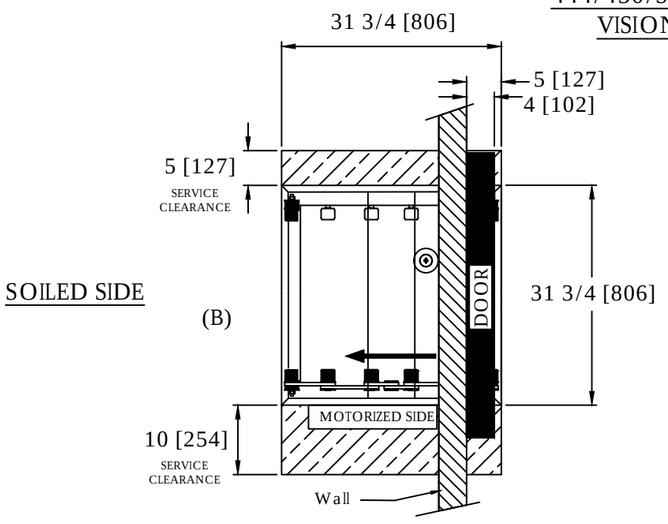
(C) FOR AMSCO 3052 / 5052 / 7052HP / VISION SC, KITS ARE SCS-L-012, SCS-L-014, SCS-L-016,SCS-L-018.
FOR 444/450/SYNERGY/GENFORE, KITS ARE SCS-L-011, SCS-L-013, SCS-015, SCS-L-017.

STERIS®

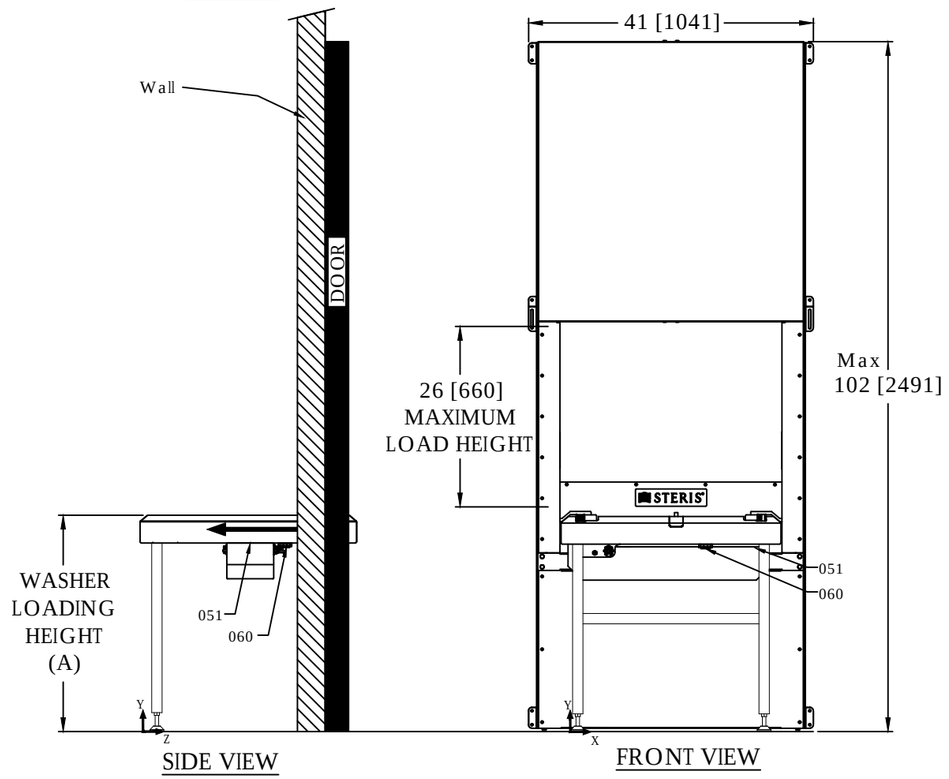
TITLE: SCS CONVEYOR SYSTEM
LOAD/UNLOAD CONVEYORS
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C

REQUIRED INSTALLATION/CONFIGURATION ALONG WITH A 444/450/SYNERGY/GENFORE/AMSCO 3052/5052/7052HP OR A VISION SC EXCEEDING THE CLEAN SIDE WALL BY 4-1/2"



TOP VIEW



SIDE VIEW

FRONT VIEW

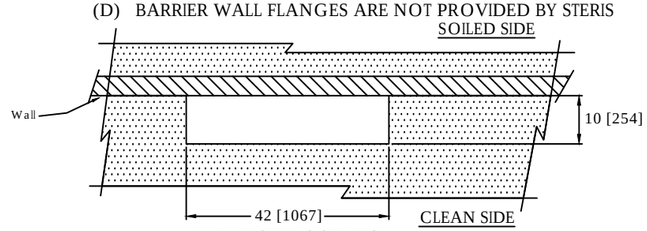
CLEAN SIDE

CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
051	30 [762]	26 3/4 [680]	15 7/8 [405]
060	11 1/8 [283]	25 3/4 [655]	20 7/8 [530]

UTILITY REQUIREMENTS CHART

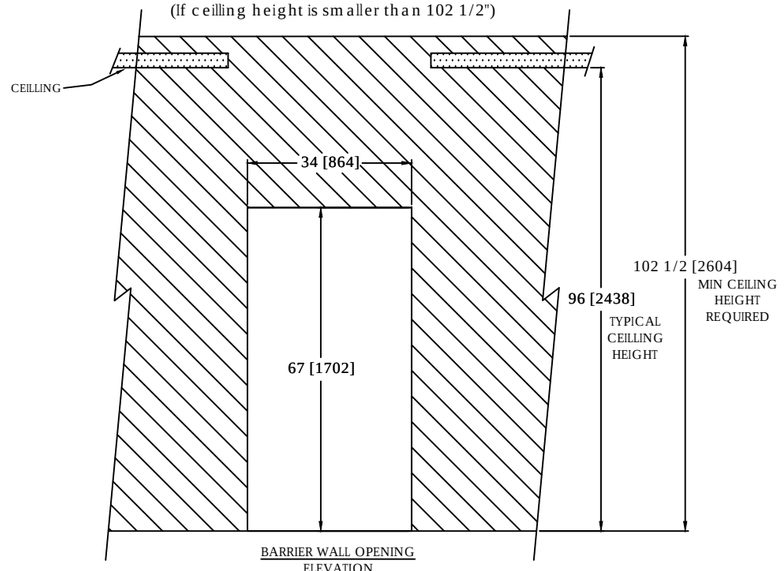
	DESCRIPTION	CONNECTION TYPE	CONNECTION SIZE	PRESSURE RANGE (DYNAMIC)	OPERATING CONSUMPTION
051	AIR	Pneumatic Coupling	1/4 [6]	80 PSIG [552 kPa]	1 SCFM [1.8 M³/H]
060	DRAIN	MALE	1 1/2 [38]		
090	ELECTRICAL (C) (See Power Supply table (2,B-9))	CONDUIT	1/2 [13]		
	SHIPPING DIMENSION W x H x L AND WEIGHT				430 lbs [60 Kg] 50"[1270] X 66"[1676] X 40"[1016]

NOTES:
(A) HEIGHT IS ADJUSTABLE FROM 29 3/4" [756] TO 32 1/4" [819] .
(B) A LINE END CONVEYOR (SCS-LE OR SCS-2W-LE) OR A BASIC MOTORIZED (SCS-BM) MUST BE PLACE AT THE DOWNSTREAM POSITION IN ANY CIRCONSTANCES.
(C) SCS-M-RD (CONVEYOR AND DOOR) COUNTS FOR ONE POWERED CONVEYOR WHEN CONNECTED TO A POWER SUPPLY.
(D) BARRIER WALL FLANGES ARE NOT PROVIDED BY STERIS



MINIMAL CEILLING OPENING
TOP VIEW

(If ceilling height is smaller than 102 1/2")



BARRIER WALL OPENING
ELEVATION

(D)

GENERAL NOTES:
1. CUSTOMER MUST BE SURE THAT MACHINE STANDS ON A NON-COMBUSTIBLE FLOOR.
2. ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES.

MOTORIZED RETURN DOOR
(SCS-M-RD)

STERIS®

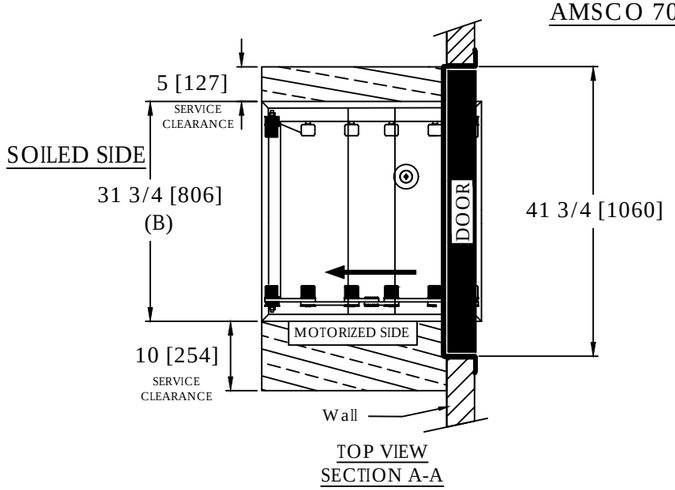
STERIS Canada Corporation

TITLE: SCS CONVEYOR SYSTEM
MOTORIZED RETURN DOOR CONVEYOR
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C

Released

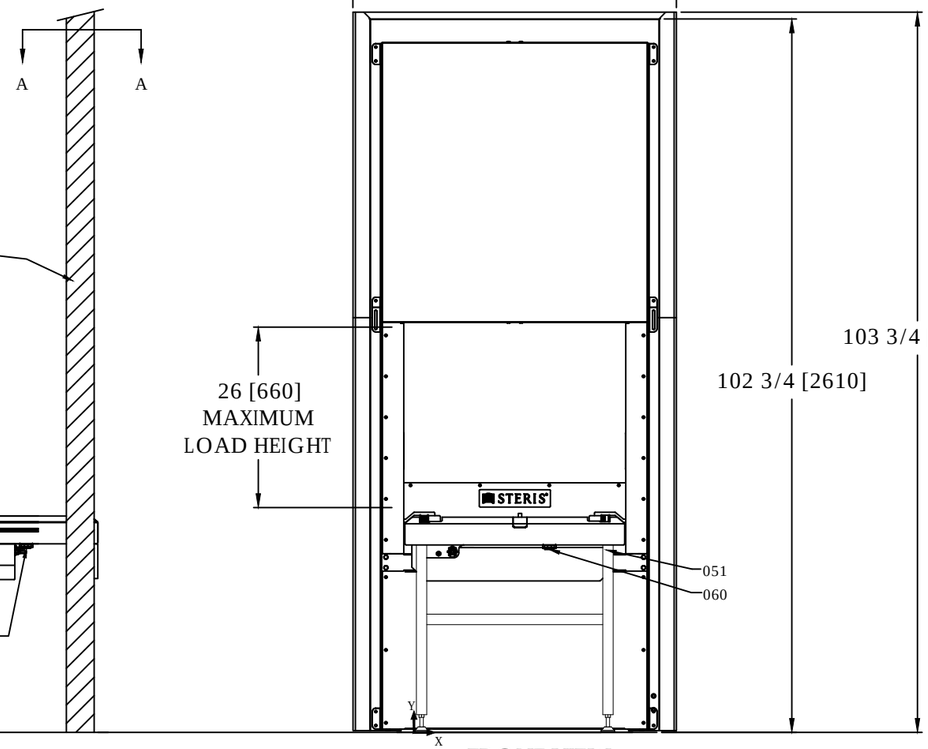
REQUIRED INSTALLATION/CONFIGURATION ALONG WITH A AMSCO 7052HP OR VISION SC FLUSH WITH CLEAN SIDE WALL



TOP VIEW
SECTION A-A

CONNECTION POSITION WITH REFERENCE POINT			
	SCS		
	X	Y	Z
051	30 [762]	26 3/4 [680]	15 7/8 [405]
060	11 1/8 [283]	25 3/4 [655]	20 7/8 [530]

CLEAN SIDE



SIDE VIEW

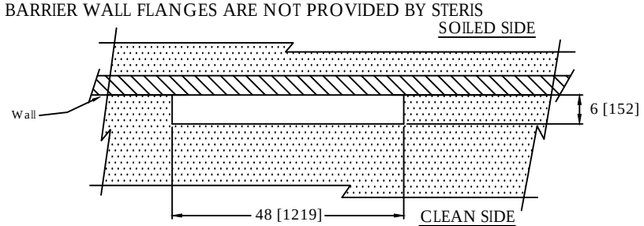
FRONT VIEW

MOTORIZED RETURN DOOR INSTALLED WITH THE RECESS INSTALLATION KIT

(SCS-M-RD) (SCS-15)

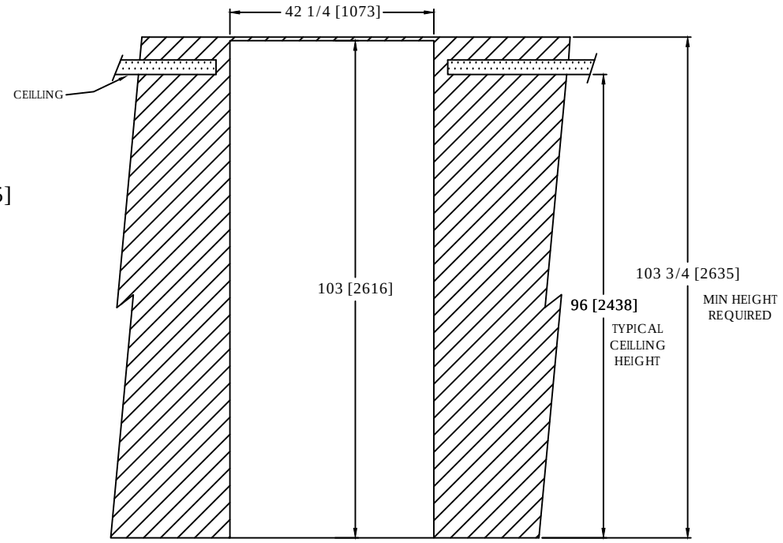
UTILITY REQUIREMENTS CHART					
	DESCRIPTION	CONNECTION		PRESSURE RANGE (DYNAMIC)	OPERATING CONSUMPTION
		TYPE	SIZE		
051	AIR	Pneumatic Coupling	1/4 [6]	80 PSIG [552 kPa]	1 SCFM [1.8 M³/H]
060	DRAIN	MALE	1 1/2 [38]		
090	ELECTRICAL (C) (See Power Supply table (2,B-9))	CONDUIT	1/2 [13]		
	SHIPPING DIMENSION W x H x L AND WEIGHT				430 lbs [60 Kg] 50"[1270] X 66"[1676] X 40"[1016]

NOTES:
(A) HEIGHT IS ADJUSTABLE FROM 29 3/4" [756] TO 32 1/4" [819] .
(B) A LINE END CONVEYOR (SCS-LE OR SCS-2W-LE) OR A BASIC MOTORIZED (SCS-BM) MUST BE PLACE AT THE DOWNSTREAM POSITION IN NO CIRCUMSTANCES.
(C) SCS-M-RD (CONVEYOR AND DOOR) COUNTS FOR ONE POWERED CONVEYOR WHEN CONNECTED TO A POWER SUPPLY.
(D) BARRIER WALL FLANGES ARE NOT PROVIDED BY STERIS



MINIMAL CEILLING OPENING
TOP VIEW

(If ceilling height is smaller than 103 3/4")



(D)

BARRIER WALL OPENING
ELEVATION

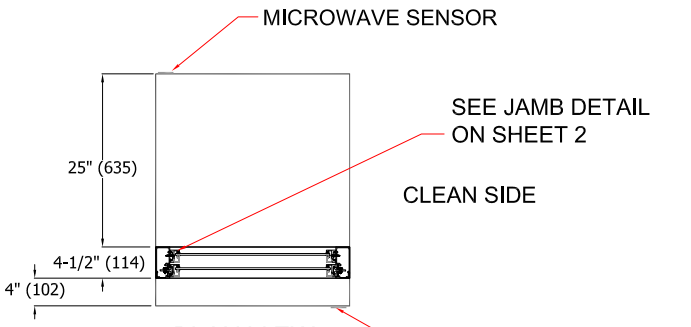
GENERAL NOTES:
1. CUSTOMER MUST BE SURE THAT MACHINE STANDS ON A NON-COMBUSTIBLE FLOOR.
2. ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES.

STERIS

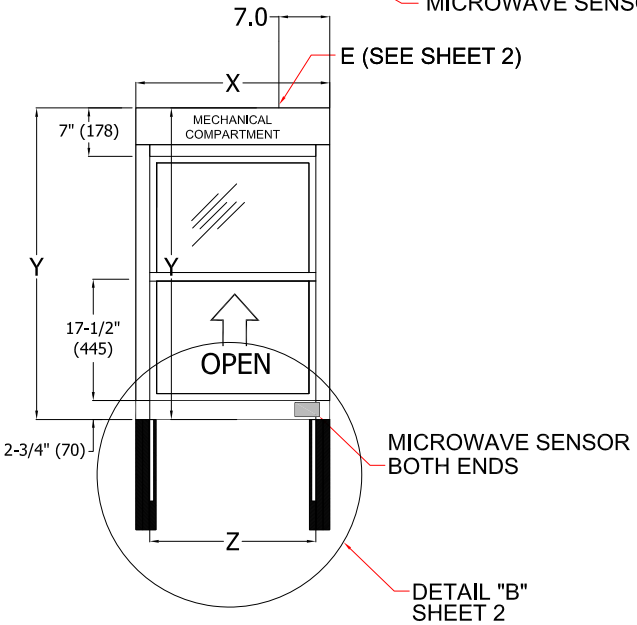
STERIS Canada Corporation

TITLE
SCS CONVEYOR SYSTEM
MOTORIZED RETURN DOOR CONVEYOR
DOMESTIC

DWN. Christine Fortier | Drawing Number 920506414.C



PLAN VIEW



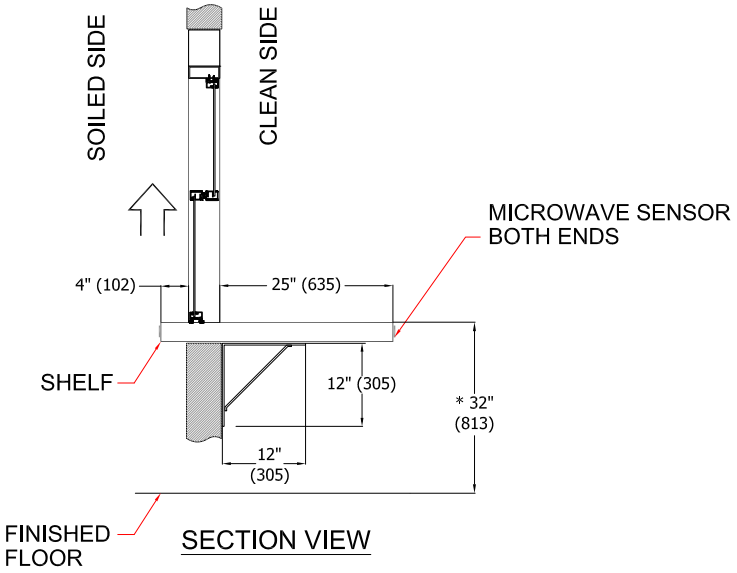
INTERIOR ELEVATION

SPECIFICATIONS

- FRAME: 6063 T5 TEMPER CUSTOM ALUMINUM EXTRUSIONS
- FINISH: CLASS II CLEAR ANODIZED ALUMINUM
- GLASS: 1/4" (6.4) CLEAR TEMPERED GLASS
- AUTOMATIC OPEN / CLOSE
- DUAL MICROWAVE SENSOR ACTUATION FROM INTERIOR AND EXTERIOR SIDE
- 304 STAINLESS STEEL SHELF, BRUSHED FINISH

DIMENSIONS IN ( ) ARE METRIC, MILLIMETERS

* SITE/ CUSTOMER VERIFIED. ENSURE COORDINATION WITH ADJACENT COUNTERS AND BACKSPLASHES ON BOTH SIDES OF WALL



SECTION VIEW

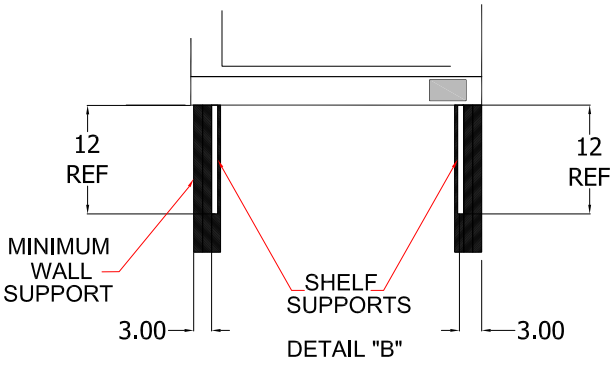
FINISHED OPENINGS,SERVICE WIDTHS & WEIGHTS FOR ENDO WINDOWS					
UNIT	X FINISHED OPENING WIDTH	Y FINISHED OPENING HEIGHT	Z SERVICE WIDTH	SHIPPING WEIGHT (LBs, Kg)	OPERATING WEIGHT (LBs, Kg)
PTWAENDO1100	28-1/4" (718)	45-1/4" (1149)	24" (610)	280, 127	250, 113
PTWAENDO2100	34-1/4" (870)	45-1/4" (1149)	30" (762)	300, 136	260, 118
PTWAENDO3100	40-1/4" (1022)	45-1/4" (1149)	36" (914)	350, 159	275, 125

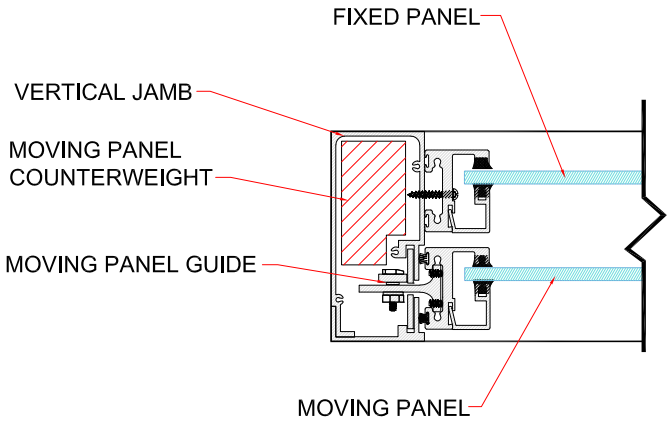
STERIS Corporation

TITLE

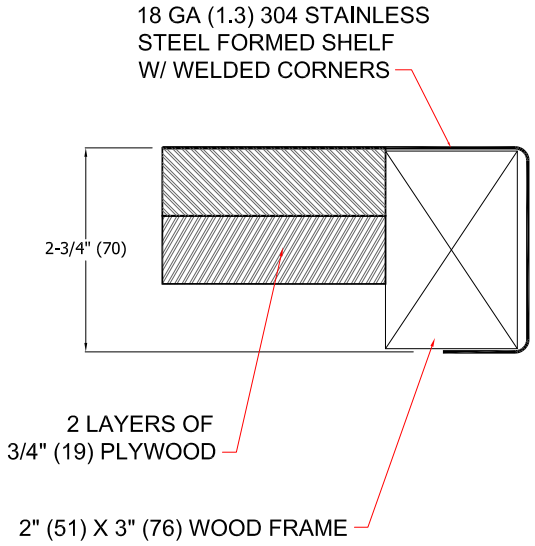
AUTOMATED-PASS-THROUGH-WINDOW ENDO

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	B.GIELINK	10231866	10088459	B





JAMB DETAIL



SHELF EDGE DETAIL

ENDO, AUTOMATIC PASS THROUGH WINDOW, UTILITY REQUIREMENTS CHART				
UTILITY		PARAMETERS AND REQUIREMENTS		
		CONNECTION SIZE / TYPE	NOMINAL AMPERAGE	RECOMMENDED CIRCUIT
ELECTRICITY (E)	120V, 60 HZ	½" NPT	1A	15A

NOTES

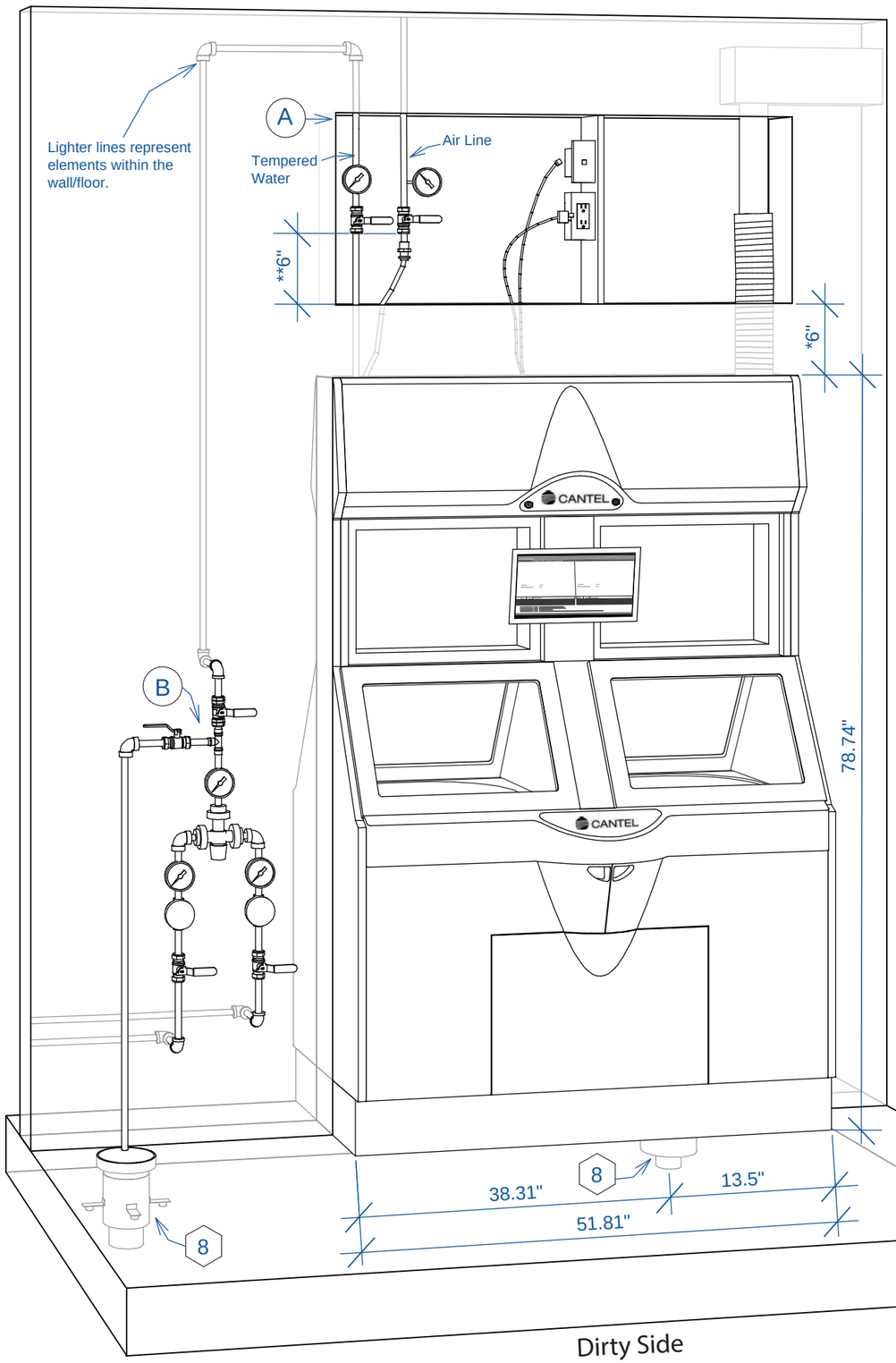
1. LOCAL AND NATIONAL CODES MUST BE FOLLOWED BY THE INSTALLER, ADHERE TO LOCAL CODES AND PERMITS ARE THE RESPONSIBILITY OF THE CUSTOMER UNLESS AGREED IN WRITING WITH STERIS CORPORATION.
2. WHEN INSTALLING: DISCONNECTS MUST BE LOCATED IN A SUITABLE LOCATION WITHIN LINE OF SIGHT AND CLEAR OF ANY OBSTRUCTIONS THAT WOULD PLACE 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.
3. 110 / 120 VAC REQUIRE A THREE (3) WIRE CONNECTION (L1, NEUT, GRND).

STERIS Corporation

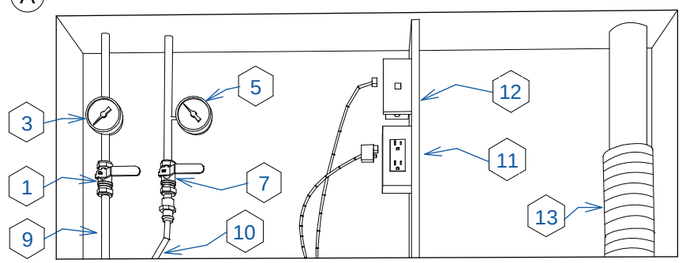
TITLE

AUTOMATED-PASS-THROUGH-WINDOW
ENDO

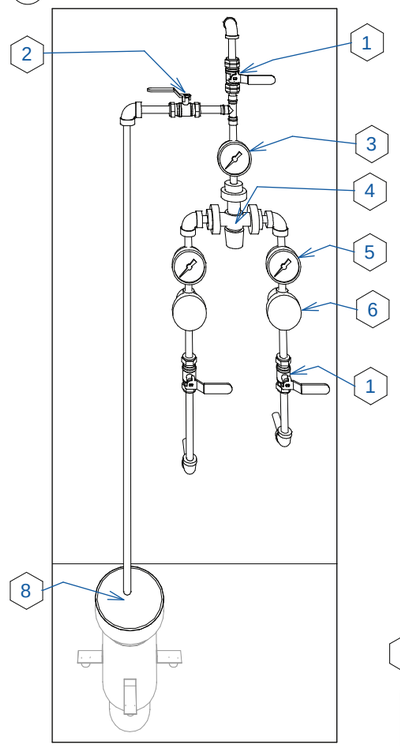
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	B.GIELINK	10231866	10088459	B

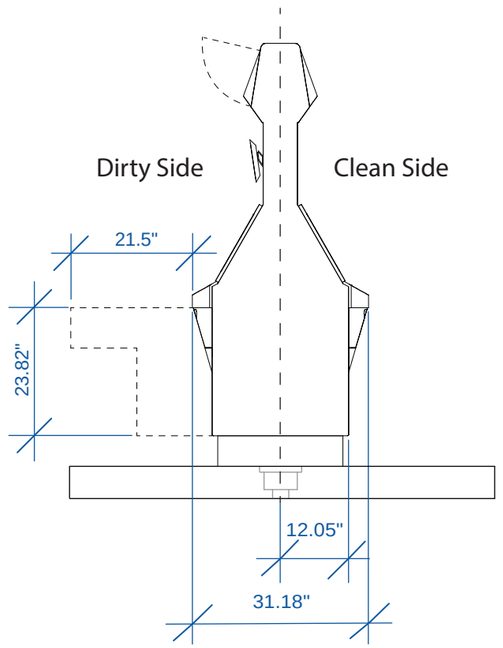


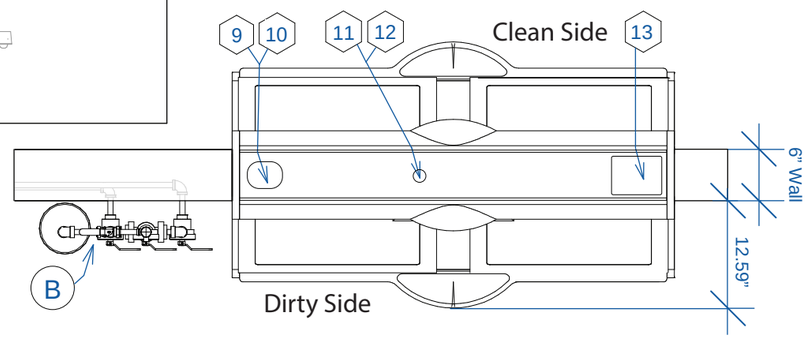
A Access Panel Detail View



B Plumbing Detail View







CANTEL

ADVANTAGE PLUS™ Pass-Thru

Endoscope Reprocessing System

1. Water shut off valve
2. Bypass valve for testing and warming water supply
3. Temp/Pressure combo gauge
4. Mixing valve (See Appendix D)
5. Pressure gauge
6. Pressure regulator
7. Shut off valve for Air supply lines
8. Floor Drain
9. Water connection
10. Compressed air connection
11. Electrical connection
12. Network connection
13. Ventilation

Important Callouts

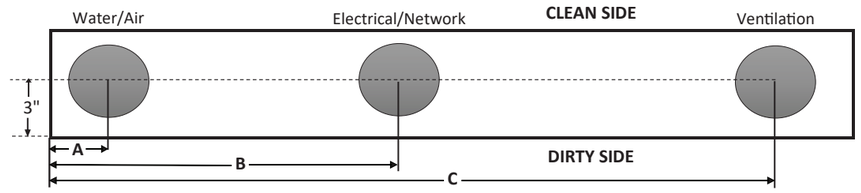
*6" distance needed for trim kit.
**6" distance needed for connections.

Measurements shown are machine only, for wall opening measurements refer to Site Requirements document 50098-1324.

For clarification and/or questions please contact Technical Support at 1.800.444.4729.

2019 Revit and CAD file available at www.endoinfectionprevention.com

Underside Wall Openings for Facility Connections (viewed from above)



On Center Measurements
A: 4.75"
B: 22.5"
C: 48.4"

Openings:
4" Round
Center is 3" from Dirty Side for all Wall Widths

ADVANTAGE PLUS™ Pass-Thru

Endoscope Reprocessing System

SITE REQUIREMENTS

NORTH AMERICA

MEDIVATORS
A Cantel Medical Company

ADVANTAGE PLUS™
is a trademark of Medivators Inc.

ENDORA™
is a trademark of Medivators Inc.

INTERCEPT™
is a trademark of Medivators Inc.

RAPICIDE™
is a trademark of Medivators Inc.

All other company or product names referenced in this document are trademarks of their respective owner.

50098-1324-EN.NA Rev B

SITE REQUIREMENTS

The purpose of this document is to provide the customer with requirements that need to be met to ensure the proper installation of the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessing System.

- ADVANTAGE PLUS Pass-Thru Endoscope Reprocessor User Manual (PN 50098-704-EN.NA)

It is the responsibility of the customer to meet these requirements to ensure proper installation of the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessor by providing qualified personnel to install the facility connections for the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessing System to the building supply (Water, Electrical, Drain, Air and Network/Internet) during the installation process. Medivators will make the physical connections between the facility connections and the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessing System.

Any deviation from these specifications may cause operational issues that would not be covered by the Warranty.

BY SIGNING BELOW CUSTOMER ACKNOWLEDGES THAT:

1. **Customer reviewed the Site Requirements for the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessor(s) as indicated in this document.**
2. **The customer assumes complete responsibility for meeting the specifications and requirements set forth in the Site Requirements documentation to ensure proper installation and performance of the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessor(s). Failure of the customer to comply with the Site Requirements or any deviation from the specifications set forth herein will compromise the functionality of the reprocessor(s), and/or may cause operational issues which will not be covered by the Cantel Medical warranty and are hereby disclaimed by Cantel Medical.**
3. **The customer assumes complete responsibility for meeting the specifications and requirements set forth in the Site Requirements documentation by the agreed upon installation date between the Customer and Cantel Medical. If the Cantel Medical installation team encounters any delays due to site requirements not meeting specifications and requirements, the Customer will be charged Medivators current rates for stand-by fees, until the site requirements are met and installation activity resumes; or, if it is determined that the delay results in rescheduling the installation to a later date, the Customer will be charged for all expenses at current Medivators rates (flights, lodging, and car rental, if applicable), and travel and labor time related to the return installation dispatch.**
4. **If installation is canceled or moved 48hrs prior to the agreed upon installation date, no fee will be charged.**
5. **For customers who request or accept Medivators space planning suggestions for the site prior to installation (“Space Planning Services”), Customer agrees that the Disclaimer, indicated in this document on Page 8, will apply to such Space Planning Services.**

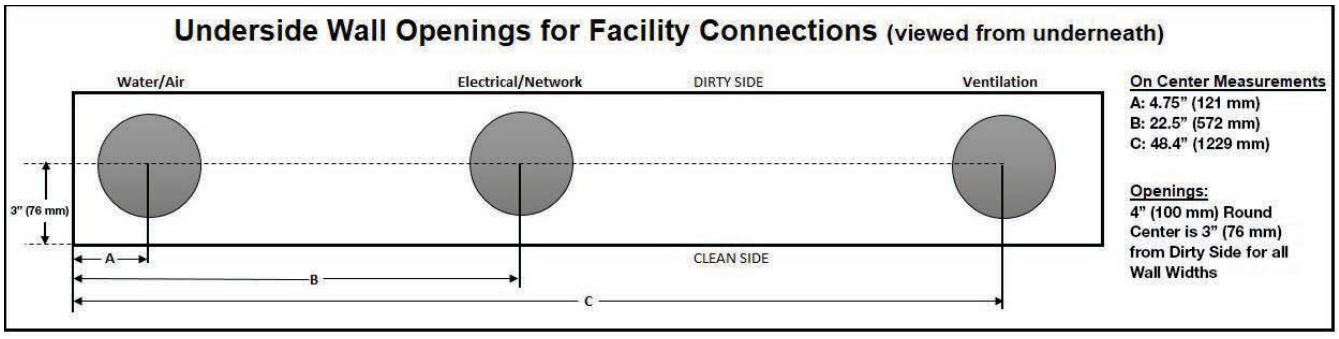
Customer Representative				Title	
Signature		Date		Email	

WALL PREPARATION

- Refer to the included installation diagram *(Appendix E and Appendix F)*.
- Wall rough opening:
  1. 1 reprocessor: 52-1/2” (1336 mm) wide x 79-3/4” (2025 mm) high
  2. 2 reprocessors: 104-1/4” (2646 mm) wide x 79-3/4” (2025 mm) high
  3. 3 reprocessors: 155-3/4” (3956 mm) wide x 79-3/4” (2025 mm) high
  4. 4 reprocessors: 207-1/2” (5266 mm) wide x 79-3/4” (2025 mm) high
- The wall opening must remain rough and consider the finished flooring. An optional trim kit is available to finish and seal the opening once the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessor is installed. Medivators trim requires 4” (100 mm) of uninterrupted wall space on the sides and top of the reprocessor for trim attachment and is **the responsibility of the facility to install**.
- The interface between the wall opening and the floor must not have a cove or fillet, including wall space required for trim.
- Optimal **FINISHED** wall thickness is 4-1/2” (115 mm) to 7” (180 mm). Walls larger than 7” (180 mm) will require a custom trim kit be manufactured by the facility.
- The facility connections are made inside the wall. An access panel supplied by the facility will be required to provide access to these connections *(see Appendix F)*.
- Access panels must be placed on the dirty side.
- All facility connections must be accessible in the opening.

IMPORTANT: A minimum of 6” (153 mm) of space is required below the facility connections in the wall opening to allow for machine connections to be made.

- The facility connections must not be more than 3 feet (1000 mm) above the top of the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessing System.
- The facility connections are divided into three groups:
  1. Water/Air
  2. Electrical/Networking
  3. Ventilation



- Three access holes in the underside of the wall are required to make the connections between the facility and the ADVANTAGE PLUS Pass-Thru Endoscope Reprocessing System. Access holes need to be free of sharp edges. See above diagram for measurements.

FLOOR

- The floor must be level to allow for the proper leveling and sealing of the reprocessor.
- Do not slope the floor to the floor drains.

IMPORTANT: There can be no more than a ¼" (6 mm) in elevation variation across the floor underneath the Pass-Thru(s).

WATER SUPPLY (REFER TO APPENDIX E)

The water supply must be able to provide an on-demand water temperature of 95°F ± 4°F (35°C ± 2ºC).

NOTE: It is the responsibility of the facility to meet the water supply requirements. It is also the facility's responsibility to install, maintain and troubleshoot the water supply system. Please consult a local certified plumber for your specific installation.

NOTE: The use of an on-demand water heater could be used if the system can meet the temperature and flow specifications similar to the thermostatic mixing valves. Colder climate locations should take into consideration worse case scenarios of water supply temperatures and flow when reviewing an on-demand option.

- De-ionized water (DI water), due to its corrosive nature, cannot be used in the ADVANTAGE PLUS™ Pass-Thru Reprocessor.
- Potable water is the **minimum standard**; RO water is preferred, but not required.
- It is the responsibility of the facility to filter the incoming water to 1 micron.
- If a mixing valve is used, then it must be a thermostatic mixing valve. **One mixing valve per reprocessor is REQUIRED.**
- The thermostatic mixing valve must be accessible to aid in adjustment.
- Post thermostatic mixing valve the facility must include a thermometer followed by a bypass valve to a drain.
- *Appendix D* includes a suggested list of thermostatic mixing valves.
- Cantel Medical **REQUIRES** the addition of pressure regulators, temperature and pressure gauges on each of the hot and cold-water supply lines prior to entering the thermostatic mixing valve. It is the responsibility of the facility to purchase, install and maintain these devices. Temperature and pressure gauges on the incoming water lines provide a means of monitoring the water system of the facility should water temperature issues arise. Consult a qualified plumber to assist in determining the proper regulators, temperature and pressure gauges to use.
- The incoming waterline must be a minimum of 1/2" (13 mm) ID providing a minimum flow rate of 2.6 GPM (10 l/min) (per machine) and a **DYNAMIC** water pressure between 40 to 87 PSI (3 to 6 bar) at the gauge before the Bypass Valve.
- Water consumption is approximately 8 gallons (30 Liters) per cycle for a standard endoscope disinfection cycle and 11.5 gallons (43 Liters) per cycle for an endoscope disinfection cycle with a detergent wash per machine. Water consumption for the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessing System will vary depending on the incoming water temperatures. The reprocessor will extend the initial flush up to 15 minutes to allow the water to come up to temperature to meet the minimum required temperature of the disinfectant.
- Ensure water hardness is less than 200 ppm CaCO3 (200 mg/L CaCO3) for optimal performance.

NOTE: An emergency eye wash valve **WILL NOT** meet the water temperature specifications for the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessor and should not be used.

NOTE: After the mixing valve, a bypass valve with a path to a drain separate from the main machine drain with a shutoff valve **MUST** be installed so the operator can run water through the mixing valve if the water temperature falls too low and needs to be brought to temperature.

NOTE: Mixing Valve should be located within **4 FEET** (1220 mm) of the reprocessor and be easily accessible to operators for adjustments.

NOTE: The ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessor does not require backflow protection for the incoming water supply, nor is a backflow protection device installed in the reprocessor. Please consult your local codes, standards and/or guidelines, for applicable requirements. Some backflow protection devices may require their own additional drain. The customer is responsible for meeting local requirements.

DRAIN (REFER TO APPENDIX F)

- The drain must be in the floor in the location indicated in the installation diagram.
- The drain system must accommodate draining of 10.5 gal/min (40 l/min).
- Facility must supply a flush floor drain with a minimum diameter of 4” (100 mm).

WARNING: An open trench drain CANNOT be used as the drain system for the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessor.

AIR SUPPLY

- Facility must supply a 1/4” (6 mm) NPT female connection with a shutoff valve and pressure gauge located in the wall behind an access panel.
- The facility supplied compressed air must meet these requirements:
  - 58 to 145 psi (4 to 10 bar)
  - The maximum demand of compressed air is 1.1 scfm (32 l/min ANR)
  - Filtered to 5 microns
- The maximum dew point is 45°F (7°C).
- The maximum oil concentration is 5 mg/m3.

ELECTRICAL SUPPLY

- 120 VAC ± 10%, single phase, 60 Hz, 1200 watts per unit
- Facility must supply a GFI protected NEMA 5-15R outlet located in the wall behind an access panel per unit.
- Power consumption: 180 watts at idle, 480 watts during a cycle in one basin, 720 watts during a cycle in both basins, and a nominal peak of 1200 watts per unit.

HEAT LOAD

- Idle: 600 BTU/hr.
- Cycle (1 basin): 1600 BTU/hr.
- Cycle (2 basins): 2400 BTU/hr.

VENTILATION

NOTE: It is the facility's responsibility to ensure ventilation requirements are met. Ventilation requirements are determined by OSHA based on the chemical being used for disinfection.

- It is a health and safety requirement to have a minimum of 10 air changes per hour in the room.
- Facility must supply a 4" (100 mm) round duct connection located in the wall behind an access panel.
    - A minimum of 25 cfm (12 l/s) at 0.25 inches (6 mm)-water (62 PA) static pressure is required to properly vent the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessing System.

NETWORK

- Facility is required to supply an RJ45 network connection receptacle located in the wall behind an access panel.
- The ADVANTAGE PLUS Pass-Thru Endoscope Reprocessing System is equipped with a PC running Windows 7 which will allow full networking along with the capability of remote diagnostics.

DIMENSIONS

- Shipping Dimensions
    - Crate Dimensions: 85.5" (2172 mm) H x 69.5" (1766 mm) W x 44" (1118 mm) D
    - Crate Weight: 1100 lbs (499 kgs)
- Reprocessor Dimensions
    - The physical dimensions are 51-1/2" (1306 mm) Wide x 78-3/4" (2000 mm) High x 31-1/4" (792 mm) Deep.
    - The installed weight is 882 lbs (400 kgs).

ENDOSCOPE & USER INFORMATION

- Fill out the ADVANTAGE PLUS™ Pass-Thru Endoscope Reprocessor, Endoscope List & Operator ID form (PN 50092-380) *(Appendix A and B)*.

The included checklists should be used to ensure the installation site meets the required specifications. A pre-site visit by an employee of Medivators/Cantel Medical should be made prior to installation to ensure the specifications are met and an effective installation of the equipment is possible.

SPACE-PLANNING SERVICES

For customers who request or accept Medivators space planning suggestions for the site prior to installation, the following disclaimer will apply:

CUSTOMER ACKNOWLEGES AND ACCEPTS THAT SPACE PLANNING SERVICES ARE OFFERED AND PROVIDED "AS IS" WITH NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, OF ANY KIND WHATSOEVER, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR REPRESENTATIONS AS TO THE ADEQUACY OF ANY DESIGN, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THAT ANY OF THE SERVICES WILL MEET CUSTOMER'S NEEDS OR REQUIREMENTS OR BE CAPABLE OF IMPLEMENTATION. IN NO EVENT SHALL MEDIVATORS BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR LOSS OF PROFITS, LOSS OF USE, OR ANY DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND, WHETHER OR NOT A PARTY WAS, IS, OR SHOULD BE AWARE OF SUCH LOSS OR DAMAGES. CUSTOMER AGREES THAT IT WILL RELY ON, USE AND OR OTHERWISE EMPLOY ARCHITECTS, ENGINEERS, CONSTRUCTION PROFESSIONALS AND OTHER VENDORS OR SERVICE PROVIDERS (COLLECTIVELY, "PROJECT PROFESSIONALS") REGARDING THE FEASIBILITY OR IMPLEMENTATION OF ANY SPACE PLANNING SERVICES PROVIDED BY MEDIVATORS. By accepting the Space Planning Services, (i) Customer agrees to hold Medivators and its affiliates entirely free from any liability, including financial responsibility, for all claims, losses, damages, suits, actions, costs, liabilities, or expenses incurred by Customer or its agents or affiliates as a result of any design defect, any requirement of corrective or other action or its use, reliance on, modification or implementation of any of the Space Planning Services; (ii) Customer acknowledges that Medivators is not a licensed architect or engineer or otherwise in the business of construction or space design and Customer accepts the risks involved in using such Space Planning Services from Medivators; and (iii) Customer agrees to communicate to the Project Professionals the content of all the Space Planning Services including, without limitation, all designs and plans, specifications and attachments, and to have such Project Professionals check, review, verify and approve such content prior to incorporating, using or otherwise implementing any Space Planning Service.

USER / OPERATOR ID FOR MEDIVATORS REPROCESSING SUITE OF EQUIPMENT

#	First and Last Name *(please print)*	Group *A = Administrator O = Operator B = Biomed D = Doctor (if using)*	Barcode # from badge *(if applicable)*	Facility *(if applicable)*
1				
2				
3				
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33				

APPENDIX B

FACILITY ENDOSCOPE LIST

#	Model #	Serial #	Brand	Internal ID	Customer Barcode *(if applicable)*	Department
1						
2						
3						
4						
5						
6						
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35						

PRE-SITE REQUIREMENTS CHECKLIST

INITIAL AND SIGN AT THE TIME OF PRE-SITE INSPECTION

Inspection Item	Description	Initials
Wall Preparation	Wall opening meets specification for the number of reprocessors	
	Facility connections are in the proper locations and are accessible	
	Openings in underside of the wall are the proper size and in the proper locations	
Water Supply	½" (13 mm) NPT female connection with shutoff valve and pressure gauge	
	Potable or RO water filtered to 1 micron	
	Pressure of 40 to 87 psi (3 to 6 bar) (dynamic pressure)	
	Minimum flow rate of 2.6 gal/min (10 l/min) (dynamic)	
	Supplied water temperature 95°F ± 4°F (35°C ± 2°C)	
	Water supply need dedicated drain for bypass valve	
Drain	Floor drain meets requirements and is installed in the proper location	
	Capable of draining 10.5 gal/min (40 l/min)	
Air Supply	1/4" (6 mm) NPT female connection with shutoff valve and pressure gauge	
	Pressure of 58 to 145 psi (4 to 10 bar)	
	The demand of compressed air is 1.1 scfm (32 l/min ANR)	
	Air dry and oil free per specifications	
	Filtered to 5 microns	
Electrical Supply	120 VAC ±10%, single phase, 60 Hz, 1200 Watts	
	GFI protected NEMA 5-15R receptacle	
Ventilation	Minimum of 10 room air exchanges per hour	
	4" (100 mm) round duct	
	A minimum of 25 cfm (12 l/s) at 0.25 inches (6 mm)-water (62 PA) static pressure at duct	
Network	RJ45 receptacle	
	Internet access	

Customer Site					
Customer Representative				Title	
Signature		Date		Email	

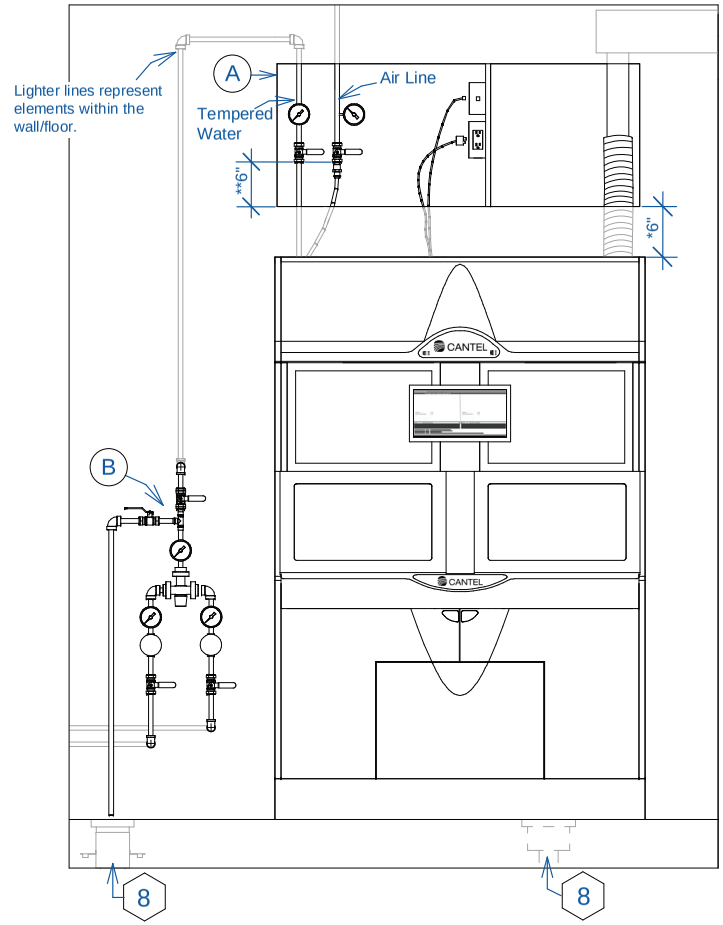
Serial #	
Serial #	
Serial #	
Serial #	
Serial #	
Serial #	

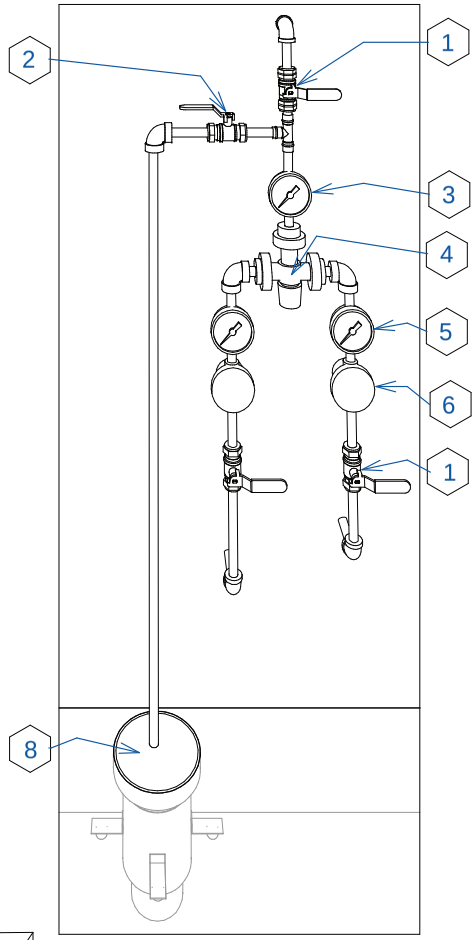
APPENDIX D

Because each installation can be unique in terms of facility and plumbing code requirements, Cantel Medical cannot recommend specific mixing valves for each installation. Experience with prior successful installations has demonstrated that the valves listed below can be expected to meet most water supply needs. The manufacturer of these valves may, from time to time, obsolete a model in this list and replace it with a like model. This list cannot be viewed as an endorsement by Medivators as we do not manufacture, test, validate or certify thermostatic mixing valves. The customer assumes the responsibility for choosing the proper fit for their individual installation needs. Due to variations in local codes, please consult your plumber before selecting a mixing valve.

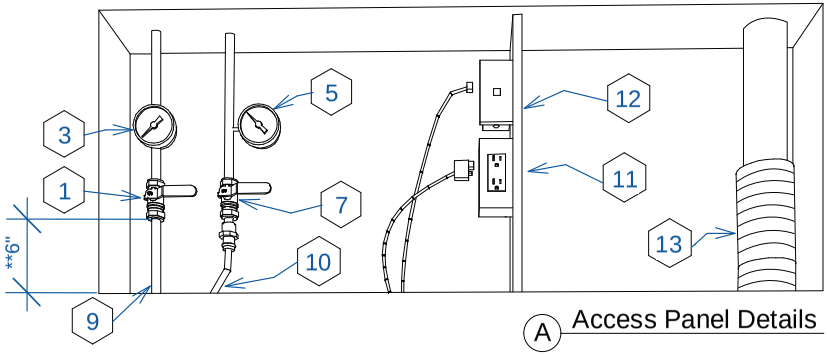
Manufacturer	Valve Series	Specifications
Honeywell	AM-1 1070 Series	70-120°F ± 3°F at 0.5-10 GPM
WATTS	LFMMV	80-120°F ± 3°F at 0.5-20 GPM
WATTS	LFL1170	60-120°F ± 3°F at 0.5-20 GPM
Symmons	6-102-1	70-110°F at 0.5-5 GPM
	6-200-1	70-110°F at 0.5-5 GPM

WARNING: An emergency eye wash valve WILL NOT meet the water temperature specifications for the ADVANTAGE PLUS™ Endoscope Reprocessors and should not be used.





B Plumbing Details



A Access Panel Details

• Views shown are from the Dirty Side

CANTEL

ADVANTAGE PLUS ™ Pass-Thru

Endoscope Reprocessing System

1. Water shut off valve
2. Bypass valve for testing and warming water supply
3. Temp/Pressure combo gauge
4. Mixing valve (See Appendix D)
5. Pressure gauge
6. Pressure regulator
7. Shut off valve for air supply lines
8. Floor drain
9. Water connection
10. Compressed air connection
11. Electrical connection
12. Network connection
13. Ventilation

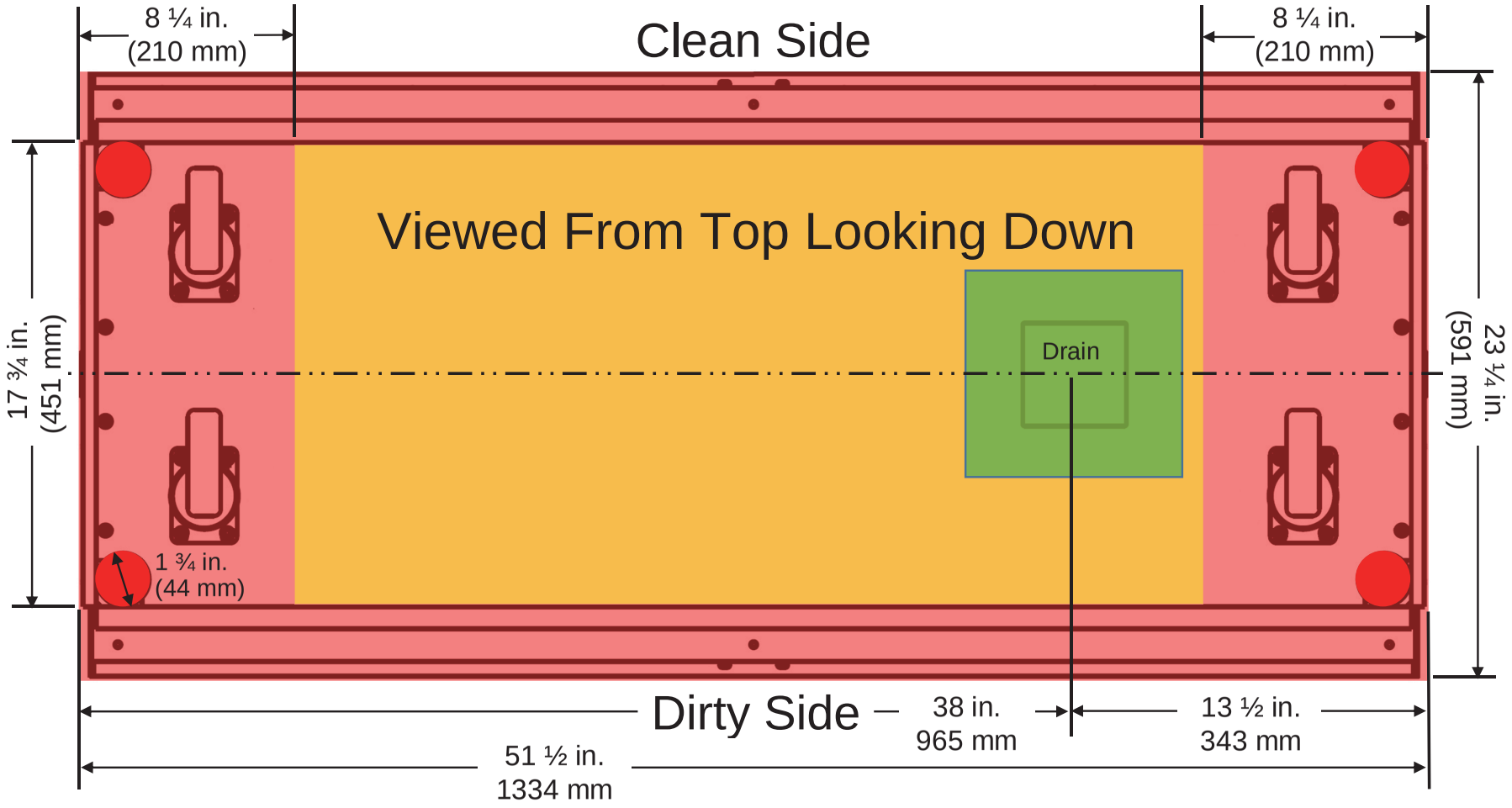
Important Callouts

*6" distance needed for trim kit.
**6" distance needed for connections.

For clarification and/or questions please contact Technical Support at 1.800.444.4729.

2019 Revit and CAD file available at www.endoinfectionprevention.com

ADVANTAGE PLUS™ Pass-Thru Floor Footprint



Preferred Floor Drain Location

Unobstructed, Level Space on Floor

Potential Floor Drain Location (requires drain extension kit 78401-682)

Levelling Foot, unit weight 882 lbs

MEDIVATORS
A Cantel Medical Company

Manufactured in the USA by:

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Toll Free: +1.800.444.4729

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Cantel Medical Devices (China) Co. Ltd.
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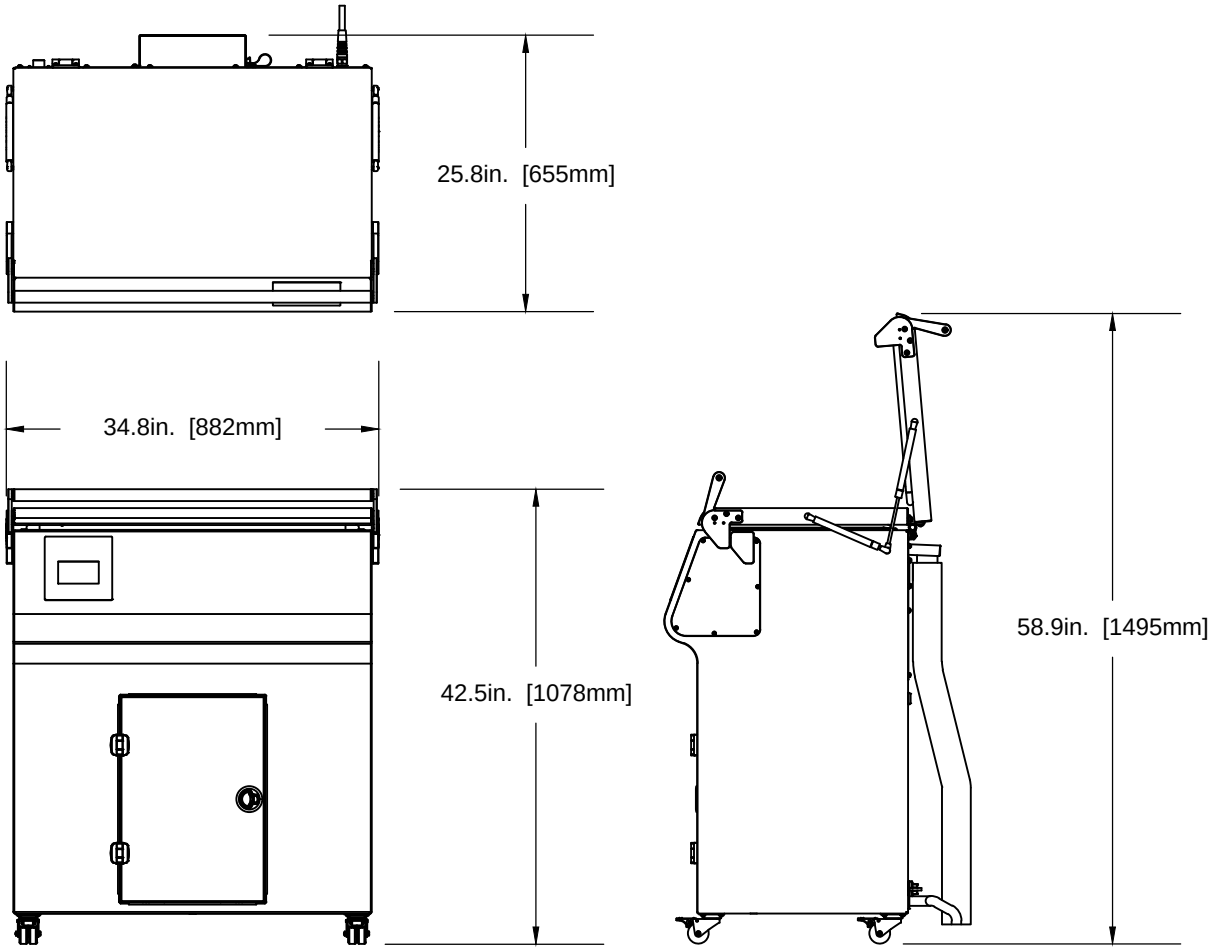
Hongmei Road, Xuhui 200233 Shanghai
Tel: +86 21 60161380
Fax: +86 21 61210913

www.medivators.com

External Dimension and Operating Clearances



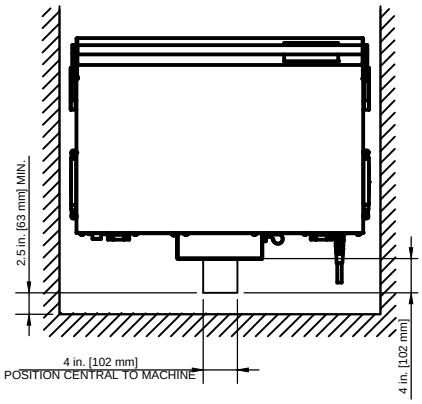
Physical dimensions and weight		
External height (lid closed)	42.5 in.	1078 mm
External height (lid open)	58.9 in.	1495 mm
External width	34.8 in.	882 mm
External depth	25.8 in.	655 mm
Net weight (dry)	306.5 lb	139 kg
Operating weight (tank filled)	428 lb	194 kg
Max. operating weight (incl. filled tank, chemicals, and instruments to be cleaned)	461 lb	209 kg

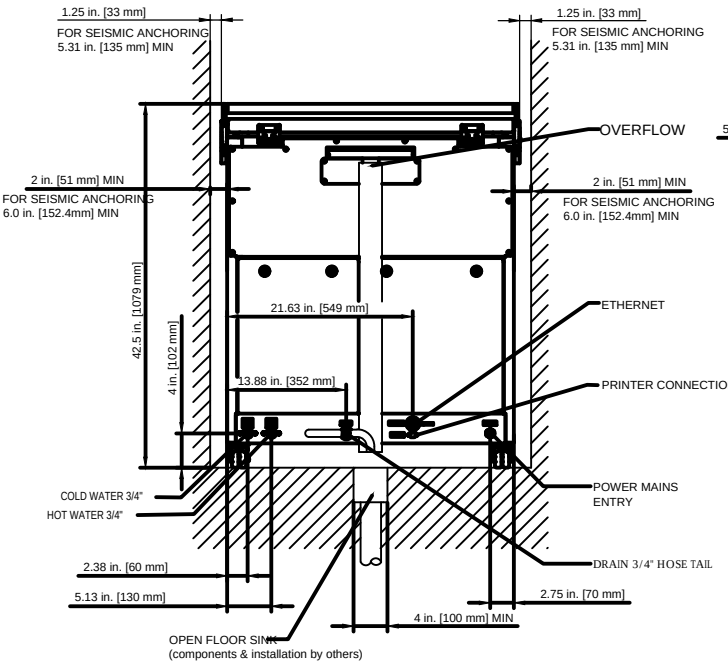
STERIS Corporation

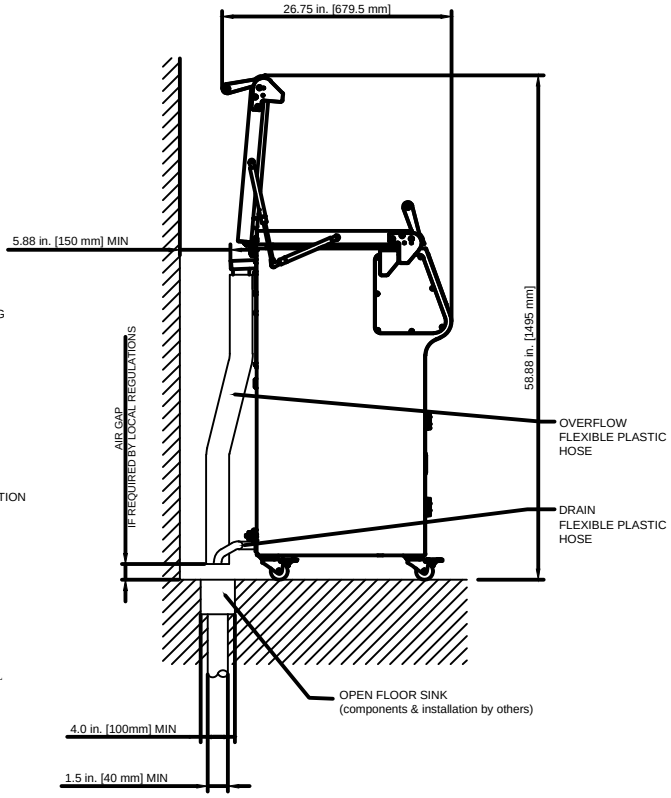
TITLE: InnoWave Unity 20 Gallon (75.7 liters) Equipment Specifications

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	TJ	11755031	11022685	A

Drain Configuration Option 1





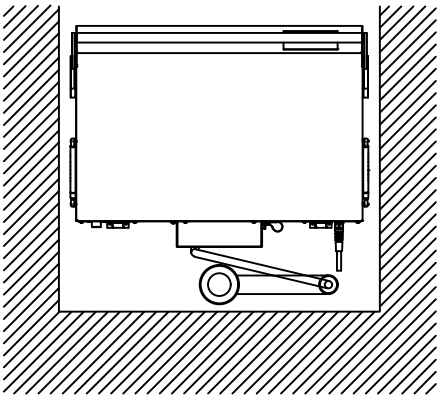


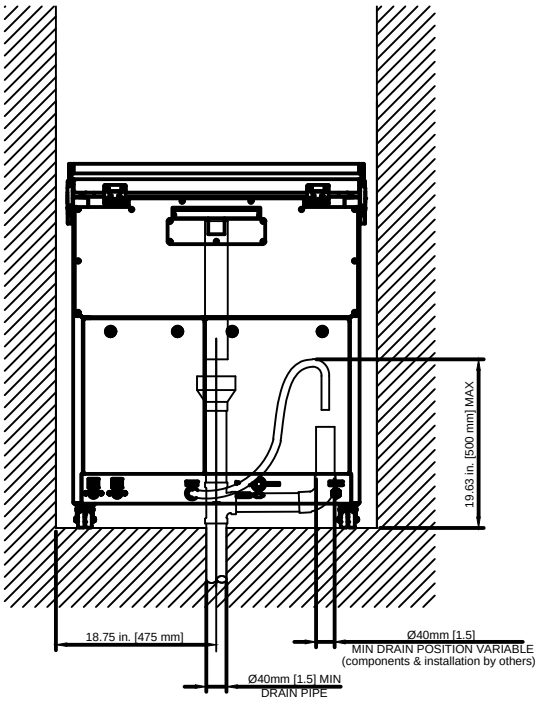
STERIS Corporation

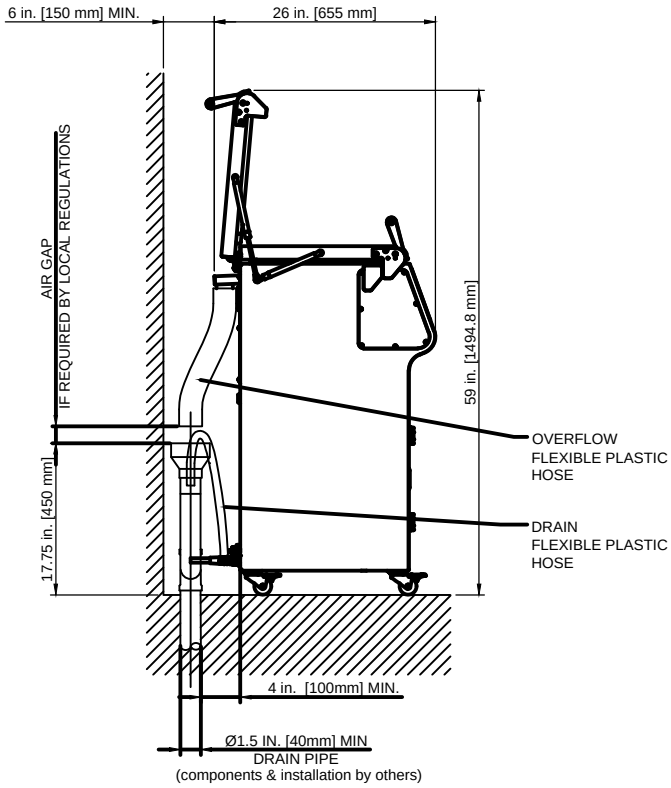
TITLE: InnoWave Unity 20 Gallon (75.7 liters) Equipment Specifications

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	TJ	11755031	11022685	A

Drain Configuration Option 2





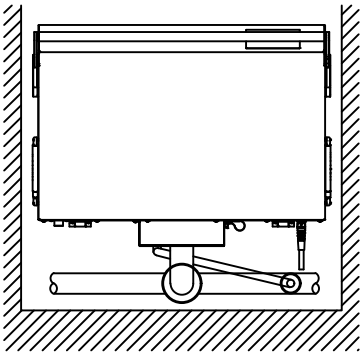


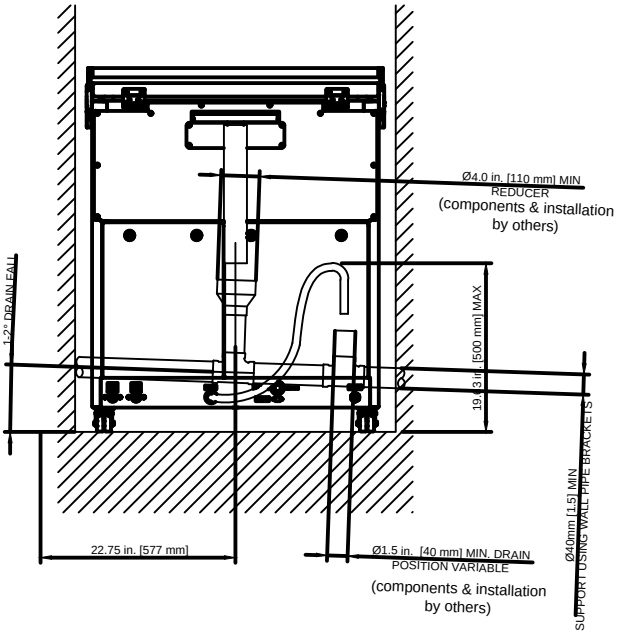
STERIS Corporation

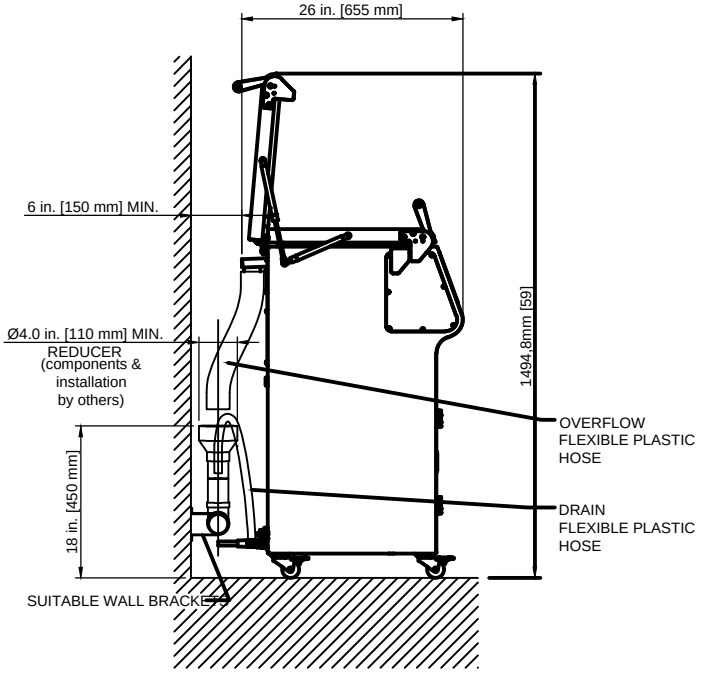
TITLE: InnoWave Unity 20 Gallon (75.7 liters)
Equipment Specifications

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	TJ	11755031	11022685	A

Drain Configuration Option 3







STERIS Corporation

TITLE: InnoWave Unity 20 Gallon (75.7 liters) Equipment Specifications

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	TJ	11755031	11022685	A

Water supply requirements:	
Water hardness (CaCO3), quality and purity, hot and cold supplies	< 125 ppm with water quality and purity tested and approved for disinfection as per ANSI/AAMI ST 15883-1:2009 (item 6.4.1 and 6.4.2) or AAMI TIR 34
Pressure (hot and cold)	30 to 70 psi (2.0 to 5.0 Bar)
Flow rate (hot and cold)	3 to 8 gal/min. (11 to 30 litres/min.)
Temperature (hot and cold)	Cold: +41 to 86 ºF (+5 to 30 ºC) Hot: +122 to 176 ºF (+50 to 80 ºC)*
Connections	3/4 in. BSP male thread Rubber gasket is required. Do not use tape or any sealant, 3/4" NPT facility connections required. Hose connections will not work.
Position (hot and cold)	Within 3 ft (1 m) of proposed unit location

*The unit is able to operate without hot water connection or with hot water supply cooler than recommended minimum temperature of +122 ºF (+50 ºC). Using only cold water or low-temperature hot water will result in longer cycle operation as water takes longer to heat up in unit.

Typical water consumption per wash

Water consumption will vary depending on volume of instruments loaded and temperature of inlet water supply. The water consumption below describes complete wash cycle at +104 ºF (+40 ºC), with no instruments loaded.

Maximum water consumption for complete wash cycle			
Stage	**Cold water**	**Hot water**	**Total for stage**
Pre-wash	13.5 gal (51 litres)	nil	13.5 gal (51 litres)
Wash	5.4 gal (20.4 litres)	8.1 gal (30.6 litres)	13.5 gal (51 litres)
Rinse	13.5 gal (51 litres)	nil	13.5 gal (51 litres)
Final Rinse	13.5 gal (51 litres)	nil	13.5 gal (51 litres)
Total water consumption	45.9 gal (173.4 litres)	8.1 gal (30.6 litres)	54.0 gal (204 litres)

Site drain requirements The site drain should meet the following requirements:	
Drain connection	3/4 in. hose tail outlet from unit. Drain must be fitted with suitable traps. No loops in the drain hose, cut the hose to length to required.
Position	Floor sink or floor drain is preferred. Standpipe and wall drains are options for connection to drain. Adhere to local code.
Capacity	8 gal/min. (30 litres/min) Maximum discharge to drain including overflow.
Overflow Drain	An air tight seal of overflow to drain may cause incorrect unit operation. An air gap must be fitted if required by code.
Effluent temperature	up to +140 ºF (+60 ºC) Max.

Electrical connections		
Model	**Conductor**	**Color and Marking**
IW523546 (208 V AC 3P+PE) supplied with 2.5 m (8.5 ft) 4-core power cable.	Protective earth	Green
	Live 1	Black 1
	Live 2	Black 2
	Live 3	Black 3
IW523535 & IW523536 (230 V AC 1P+N+PE) suppliedwith 2.5 m (8.5 ft) 3-core power cable	Protective earth	Green
	Live 1	Black 1
	Neutral or Live 2	Black 2

Electrical power supply requirements:		
Requirement	**Model**	
	IW523535 & IW523536	**IW523546**
Electrical supply voltage	230 V AC 1P+N+PE (Single-phase, neutral, and protective earth) IW523535 Frequency: 50Hz IW523536 Frequency: 60 Hz	208 V AC 3P+PE (3-phase and protective earth) Frequency: 60 Hz
Supply current	Site Current Capacity > 15 A per phase Dedicated circuit is required with a circuit breaker rating of 16A or greater.	
Electrical power requirement	4.0 kW	3.0 kW
Allowable supply voltage fluctuation	±10% of nominal voltage	
Over-voltage category II	Transient over-voltages typically present on mains supply	

Typical power consumption per wash

Power consumption will vary depending on cycle settings and temperature of inlet water supply. The power consumption below describes complete wash cycle at +104 ºF (+40 ºC).

Maximum power consumption for complete wash cycle	
Stage	Total for stage
Pre-wash	10.7 W.hr
Wash	57.2 W.hr
Rinse	6.8 W.hr
Final Rinse	6.8 W.hr
Total power consumption	81.5 W.hr

Operating / Working environment location requirements

General and environmental requirements

Proposed operating location for unit much meet or exceed following requirements

Description	Requirements
Operating surface	On level floor, capable of supporting a weight of at least 461 lb (209 kg).
Location requirement Altitude	Indoors only, altitude up to 6562 ft (2000 m)
Ambient operating temperature range	+41 ºF to 104 ºF (+5 ºC to 40 ºC)
Maximum humidity	80% relative humidity for up to +88 ºF (+31 ºC) decreasing linearly to 50% relative humidity at +104 ºF (+40 ºC)
Site services	Within 6 ft (1.8 m) of electrical isolator. Within 3 ft (1.0 m) of hot and cold water connections. Within 6 ft (1.8 m) of external site drain for effluent.
Ambient lighting	500 lux (46.5 foot-candle) minimum room lighting
Noise generated during operation	61 dBA at distance of 3.3 ft (1 m) from front of unit
Heat output during operation	205 W (700 BTU/hr) during wash cycle

Shipping information

Shipping crate dimensions and weight		
Shipping crate height	49.2 in.	1250 mm
Shipping crate width	41.0 in.	1040 mm
Shipping crate depth	28.7 in.	730 mm
Shipping crate gross weight	375 lb	170 kg

Transportation and storage

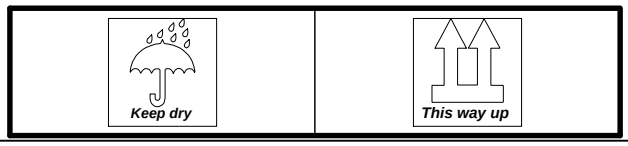
Make sure package marking instructions and environmental conditions are always followed during transport and storage of InnoWave™ Unity.

Lifting

Lifting and maneuvering the InnoWave™ Unity in shipping crate must be done with pallet truck or forklift truck able to carry load in excess of 375 lb (170 kg).

Storage markings

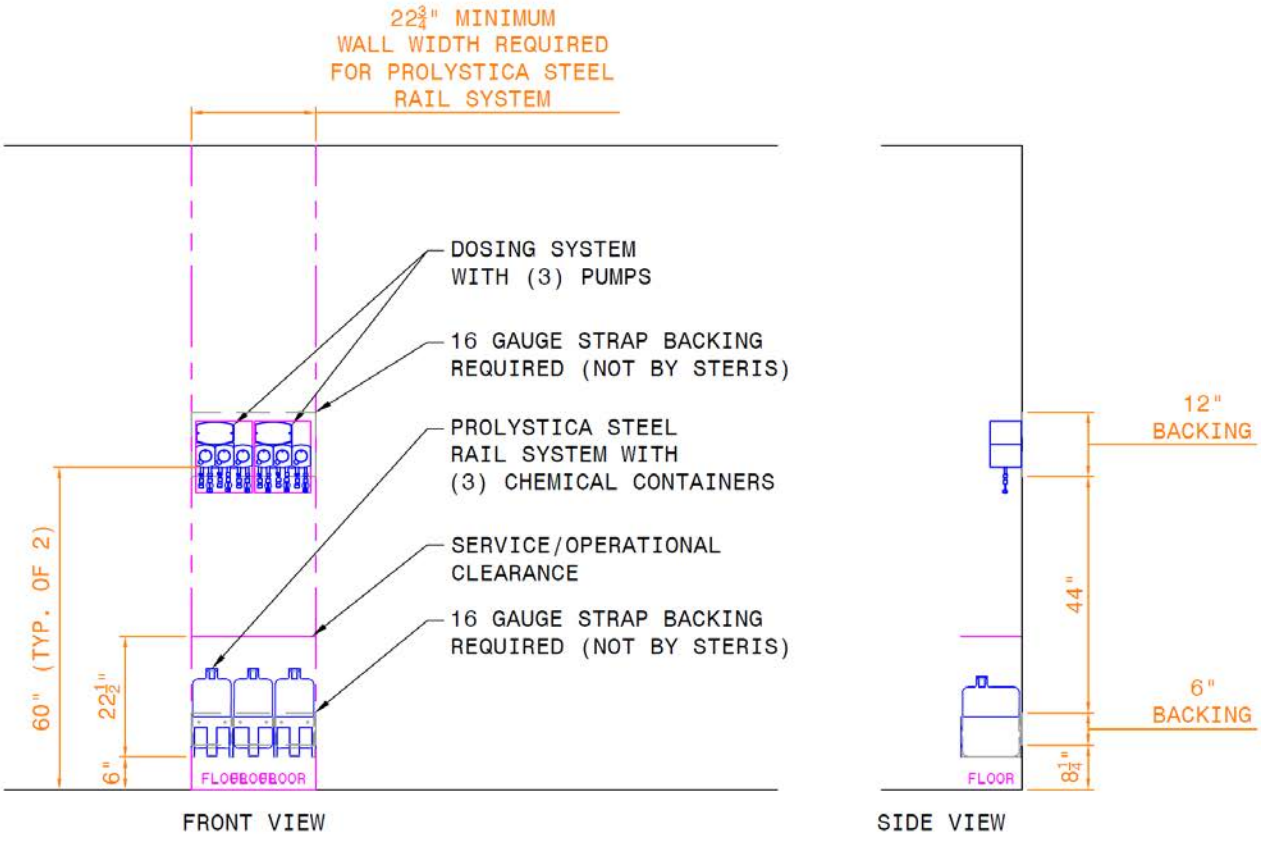
The markings on shipping crate stipulate unit's storage conditions and handling information.



STERIS Corporation

TITLE: InnoWave Unity 20 Gallon (75.7 liters) Equipment Specifications

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	TJ	11755031	11022685	A



5 DETERGENT SYSTEM ELEVATION FOR (2) WASHERS

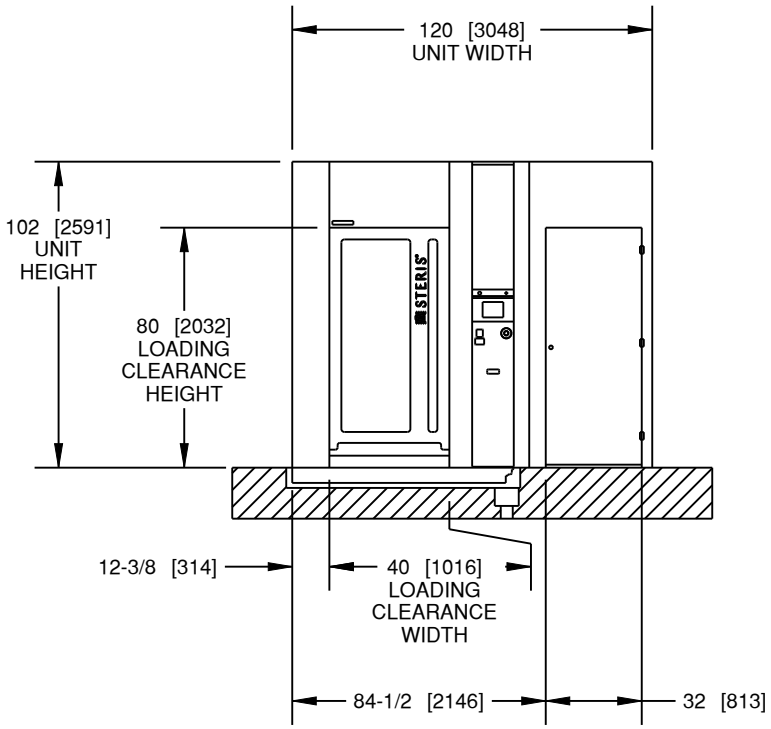
Scale: 1/2" = 1'-0"

DETERGENT SYSTEM NOTES :

1. AMBIENT TEMPERATURE SHALL NOT EXCEED 104°F.
2. DETERGENT AND SIGNAL LINES NOT TO COME INTO CONTACT WITH HOT SURFACES.
3. EXCESS LENGTH MUST BE CUT BEFORE CONNECTING TO WASHER/STATION TO AVOID FORMING BUNDLES THAT COULD AFFECT THE DETERGENT INJECTION SYSTEM'S PERFORMANCES.
4. 3"I.D. CONDUIT REQUIRED FROM PUMP LOCATION(S) TO WASHER LOCATION(S)- NOT PROVIDED BY STERIS.
5. ALL 90 DEGREE CONDUIT TURNS MUST USE SWEEPING 90 DEGREE CONNECTIONS. STRAIGHT 90 DEGREE CONNECTIONS ARE NOT RECOMMENDED.
6. FINAL LOCATION OF RUNS TO BE COORDINATED WITH ARCHITECT, CONTRACTORS, AND STERIS INSTALLATION PERSONNEL.
7. A MAXIMUM OF TWO WASHERS OR ONE CART WASHER CAN SHARE CHEMICAL CONTAINERS. DEDICATED CONTAINERS RECOMMENDED FOR EACH WASHER.
8. FOR STERIS DOSING SYSTEMS: MAX 12 FT OF INJECTION LINE FROM CONTAINERS TO DOSING STATION MAX 150 FT OF INJECTION LINE FROM DETERGENT CONTAINER TO TOP OF WASHER.*
9. DOSING SYSTEM POWERED BY THE WASHER.*

Released

TYPICAL INSTALLATION (1/2)



FRONT VIEW

NOTES:

(A) UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES [mm].
(B) CUSTOMER MUST BE SURE THAT MACHINE STANDS ON A NON-COMBUSTIBLE FLOOR.
(C) ALLOW SUFFICIENT SPACE IN FRONT OF LOADING AREA TO LOAD / UNLOAD CARTS ACCORDING TO CUSTOMER CARTS AND DIMENSION AND STERIS WASHING ACCESSORIES:
- CONTAINER RACK 63 1/2 [1612] LG
- UTENSIL RACK 65 1/2 [1663] LG
- INSTRUMENT RACK 65 [1651] LG

(D) WALLS COULD BE BUILDING WALL OR SERVICE AND NON-SERVICE S/S PANELS ACCESSORIES
(E) FOR STANDARD THROUGH-WALL UNIT, CLEARANCE BETWEEN CLOSED DOOR OF ELECTRIC CABINET AND FACILITY WALL, OR ANY OPPOSING FIXTURE, MUST MEET LOCAL CODES.
(F) SERVICE AREA ACCESS DOOR IS INSTALLED ON LOAD SIDE OF THE WASHER. LOAD SIDE CAN BE EITHER ON LEFT OR RIGHT SIDE OF THE MECHANICAL CORE.
(G) IF RECOMMENDED FLOOR CLEARANCE FOR INSTALLATION IS NOT AVAILABLE ADDITIONAL MANPOWER AND EQUIPMENT WILL BE REQUIRED.
(H) THE MINIMUM CEILING HEIGHT IS 113 (2870) IN ORDER TO BE ABLE INSTALL THE STANDARD BARRIER WALL FLANGES.
(I) CUSTOMER MUST PROVIDE A SAFETY HARNESS TIE-OFF POINT FOR A PERSONAL FALL ARREST SYSTEM AS PER OSHA GUIDELINES FOR WORK ON TOP OF THE UNIT

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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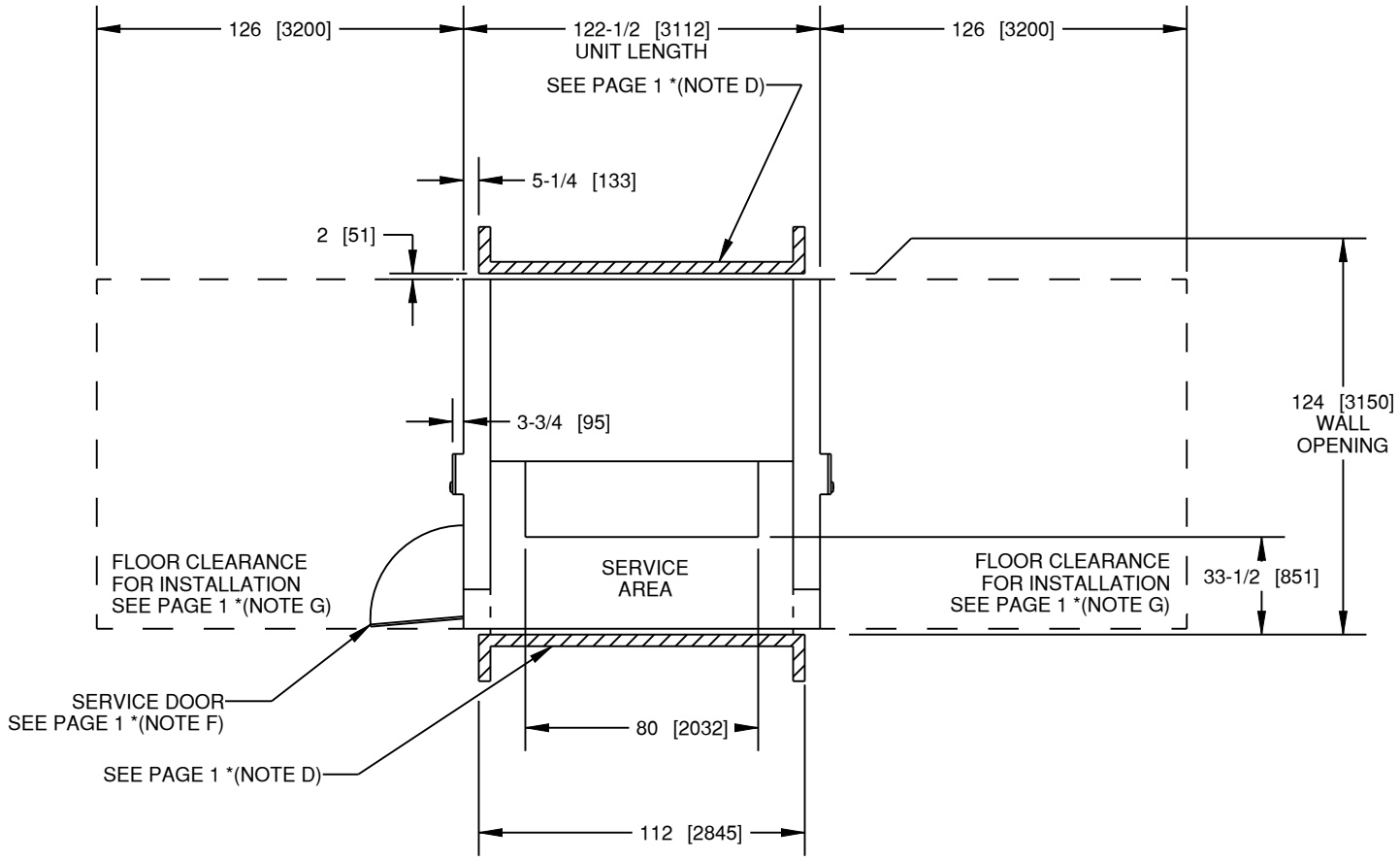
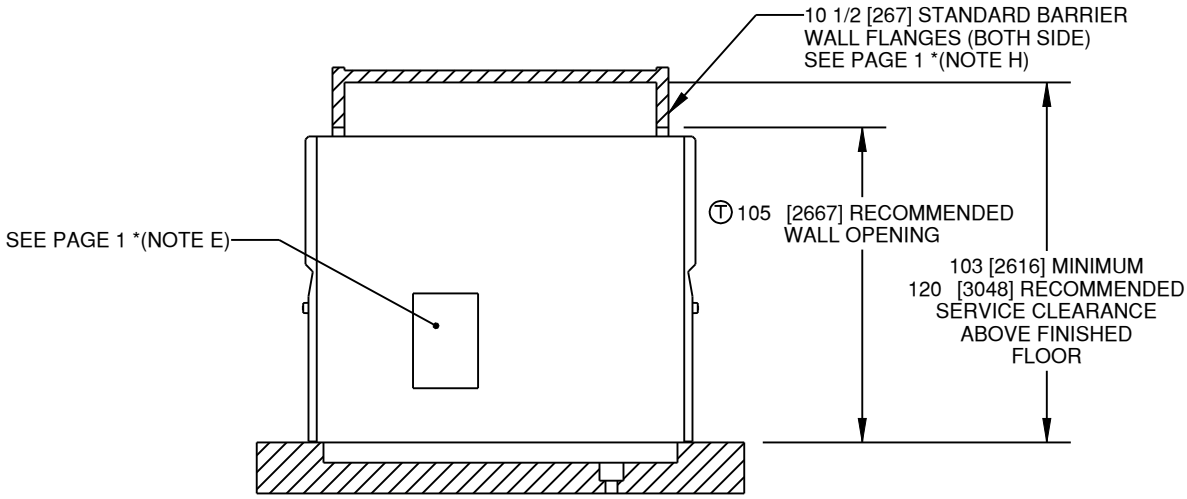
Released

TYPICAL INSTALLATION (2/2)



TOP VIEW



SIDE VIEW

STERIS Corporation

TITLE

EQUIPMENT DRAWING OF
VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR

STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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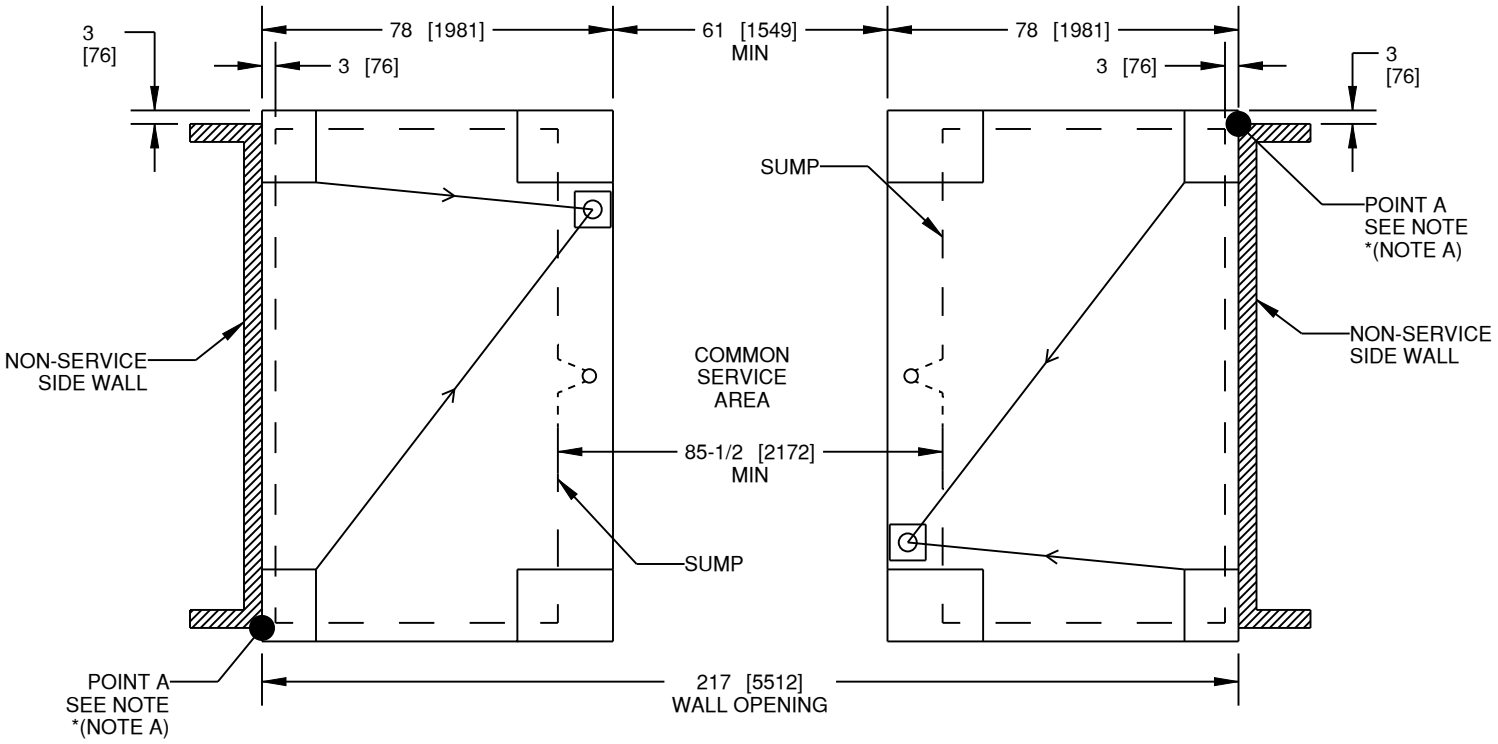
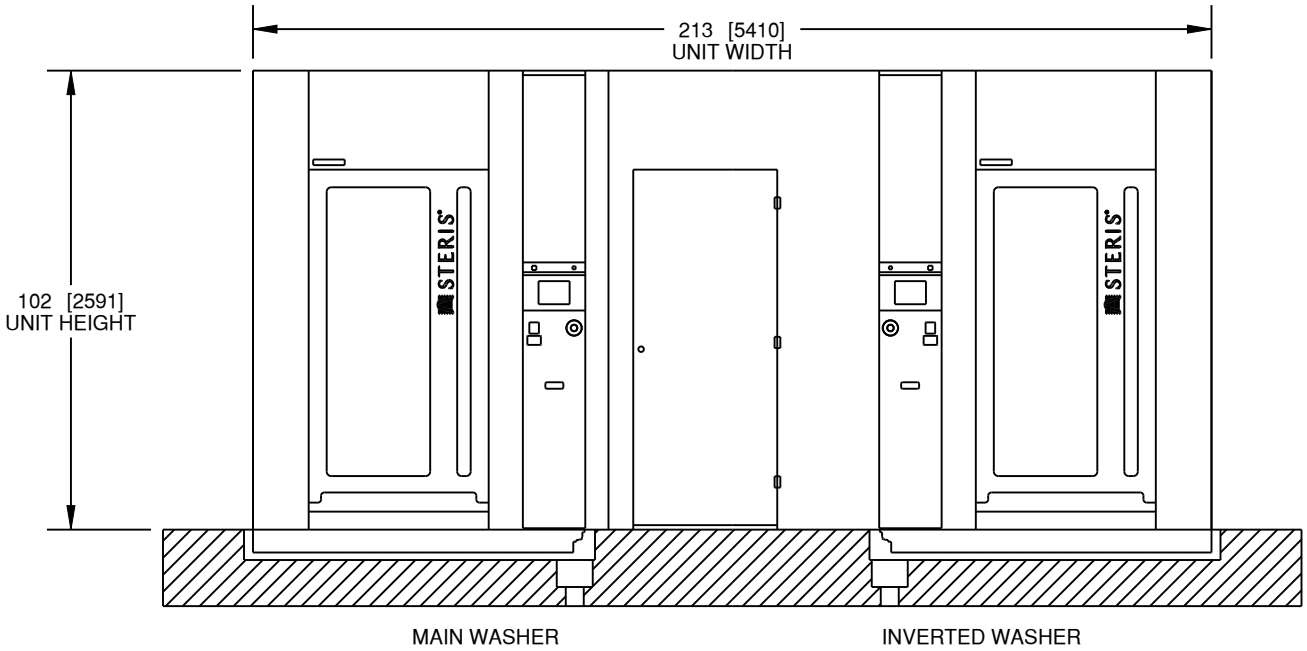
Released

SIDE BY SIDE
TYPICAL INSTALLATION





NOTES:
(A) IMPORTANT: FOR INVERTED WASHER, REFERENCE POINT "A" FOR UTILITIES POSITION IS REVERSED AS SHOWN.
(B) FOR TWO UNITS WITH SERVICE AREA BETWEEN, CLEARANCE BETWEEN CLOSED DOORS OF ELECTRIC CABINETS AND NEAREST PART OF OTHER WASHER, OR ANY FIXTURE BETWEEN, MUST MEET LOCAL CODES.

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF
VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR
STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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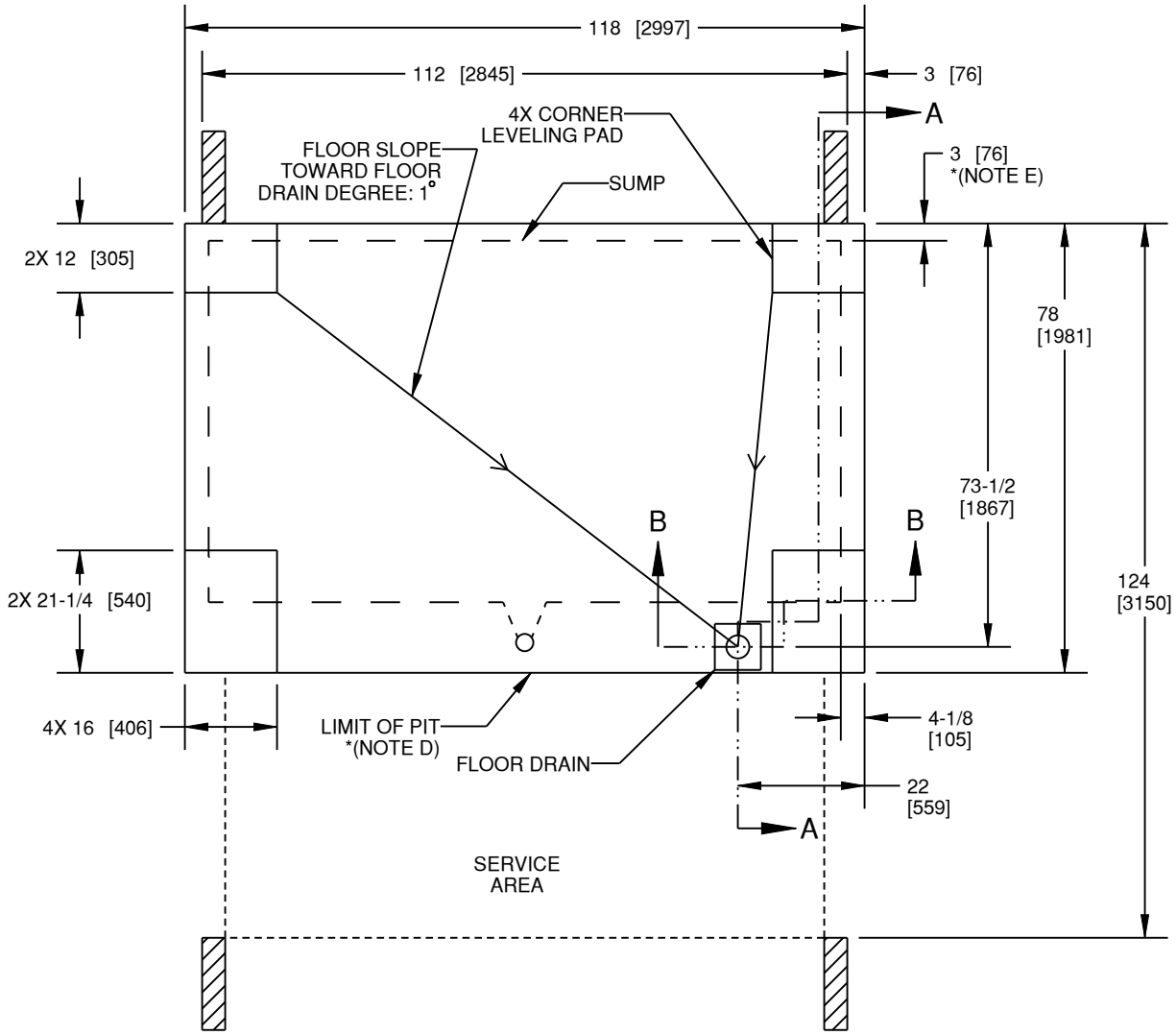
Released

STANDARD CONSTRUCTION (WITHOUT SEISMIC ANCHORAGE) 1/2



NOTES:

(A) ALL MATERIALS (INCLUDING CONCRETE, LEVELING PADS, STAINLESS STEEL ANGLES, FLOOR SINK...) ARE BY OTHERS THAN STERIS. SLOPE PIT FLOOR TO DRAIN. STAINLESS STEEL ANGLES ARE RECOMMENDED BY STERIS BUT ARE NOT NECESSARY FOR WASHER INSTALLATION.
(B) REFER TO PAGE 13 FOR FLOOR DRAIN FLOW RATE CAPACITY REQUIREMENTS.
(C) STERIS RECOMMENDS A MAXIMUM 8 in [203 mm] ROUND OR SQUARE FLOOR SINK BY 6 in [152 mm] DEEP.
(D) THIS CART WASHER CAN FIT INTO AN EXISTING 76 in [1930 mm] PIT, BUT WITH RESTRICTED ACCESS TO COMPONENTS LOCATED IN THE PIT. THE DRAIN LOCATION MAY NEED TO BE RELOCATED.
(E) FOR EXISTING 76 in [1930 mm] PIT WASHER, THE CLEARANCE WILL BE 2 in [51 mm] INSTEAD OF 3 in [76 mm].

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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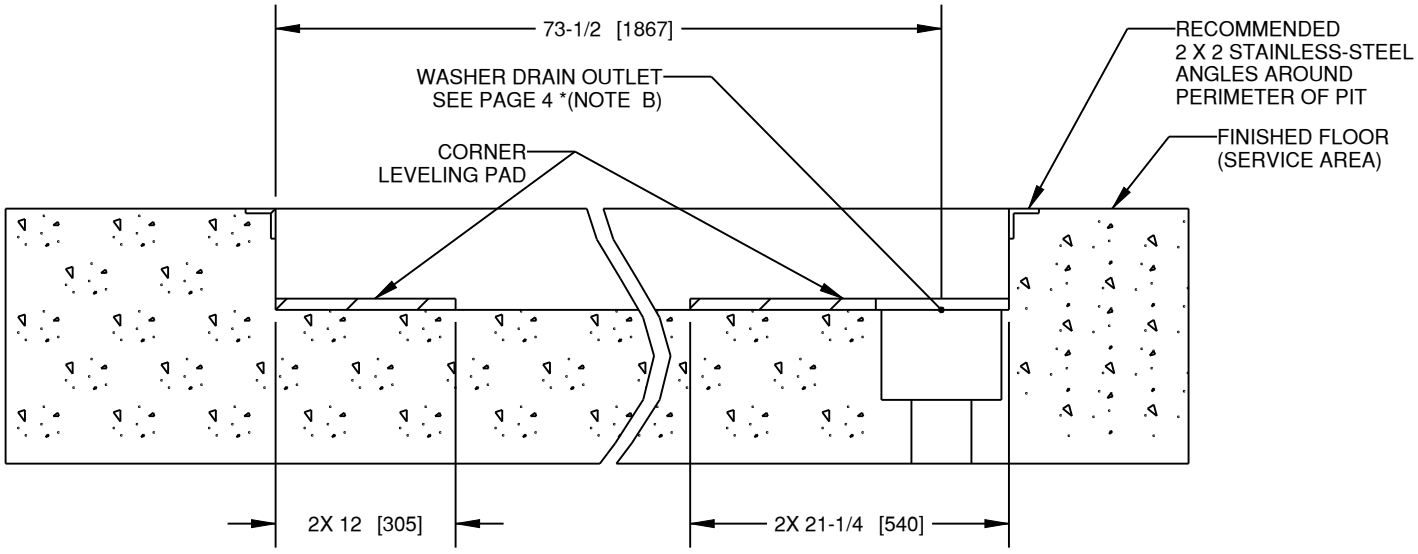
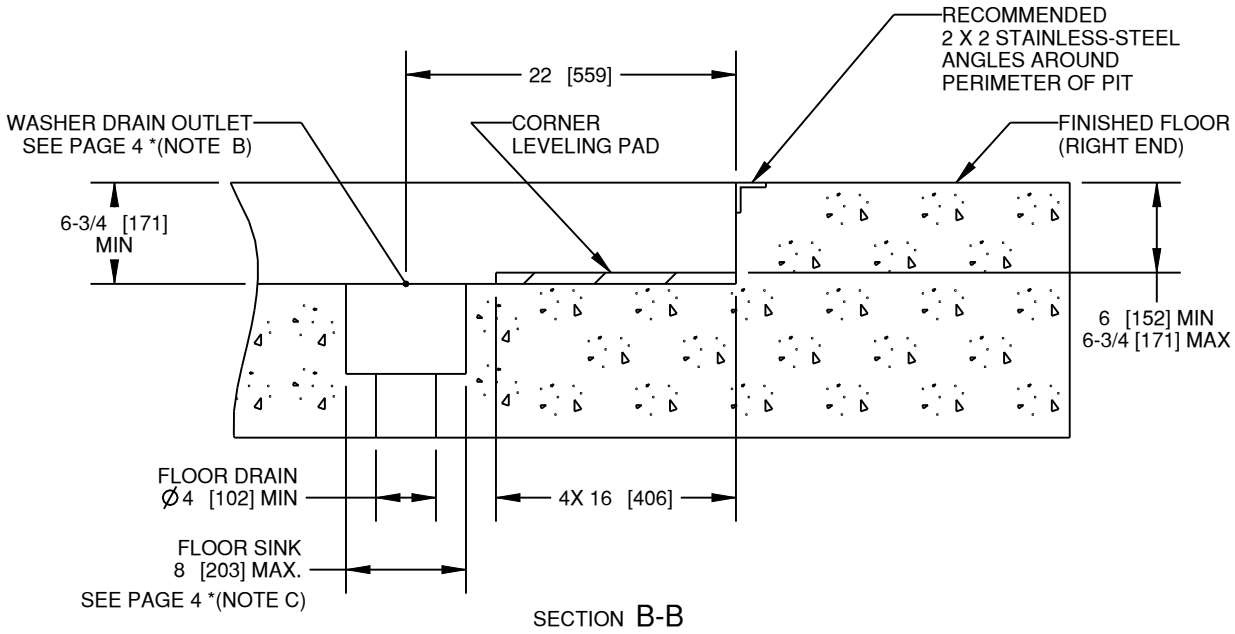
Released

STANDARD CONSTRUCTION (WITHOUT SEISMIC ANCHORAGE) 2/2



SECTION A-A



SECTION B-B

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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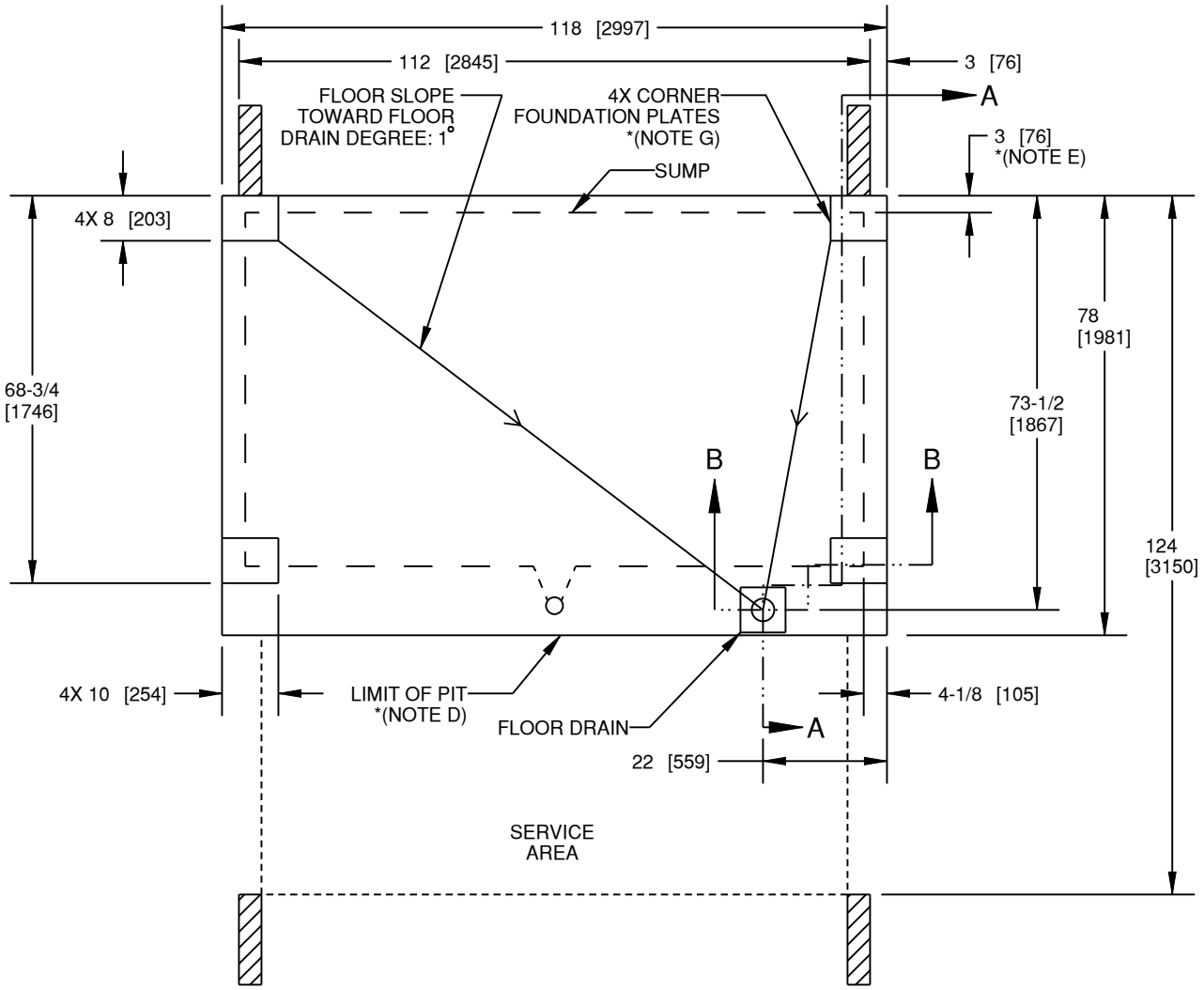
Released

CONSTRUCTION WITH SEISMIC ANCHORAGE (SEE REPORT #11863511 AGAINST CBC-2019) 1/2



NOTES:

(A) ALL MATERIALS (INCLUDING CONCRETE, STAINLESS STEEL ANGLES, FLOOR SINK...) ARE BY OTHERS THAN STERIS. SLOPE PIT FLOOR TO DRAIN. STAINLESS STEEL ANGLES ARE RECOMMENDED BY STERIS BUT ARE NOT NECESSARY FOR WASHER INSTALLATION.
(B) REFER TO PAGE 13 FOR FLOOR DRAIN FLOW RATE CAPACITY REQUIREMENTS.
(C) STERIS RECOMMENDS A MAXIMUM 8 in [203 mm] ROUND OR SQUARE FLOOR SINK BY 6 in [152 mm] DEEP.
(D) THIS CART WASHER CAN FIT INTO AN EXISTING 76 in [1930 mm] PIT, BUT WITH RESTRICTED ACCESS TO COMPONENTS LOCATED IN THE PIT. THE DRAIN LOCATION MAY NEED TO BE RELOCATED.
(E) FOR EXISTING 76 in [1930 mm] PIT WASHER, THE CLEARANCE WILL BE 2 in [51 mm] INSTEAD OF 3 in [76 mm].
(F) WELDING OF THE SUMP ATTACHMENT TO FOUNDATION PLATE IS PERFORMED BY OTHERS.
(G) REFER TO SEISMIC REPORT FOR FOUNDATION PLATES AND CONCRETE CONSTRUCTION REQUIREMENTS. STERIS OFFERS SEISMIC PRE-INSTALL ACCESSORY (FD33-5). WHICH INCLUDES THE FOUNDATION PLATES.
(H) ALL FOUR CORNER FOUNDATION PLATES UPPER SURFACE SHALL BE LEVELLED. THE PLATE STANDING ON HIGHEST PART OF THE CONCRETE FLOOR SHALL MEET THE SHOWN POSITION. STERIS PROVIDES SHIMS TO LEVEL THE OTHER CORNERS TO A MAXIMUM OF 1/2 in [12.7 mm] FROM NOMINAL POSITION.

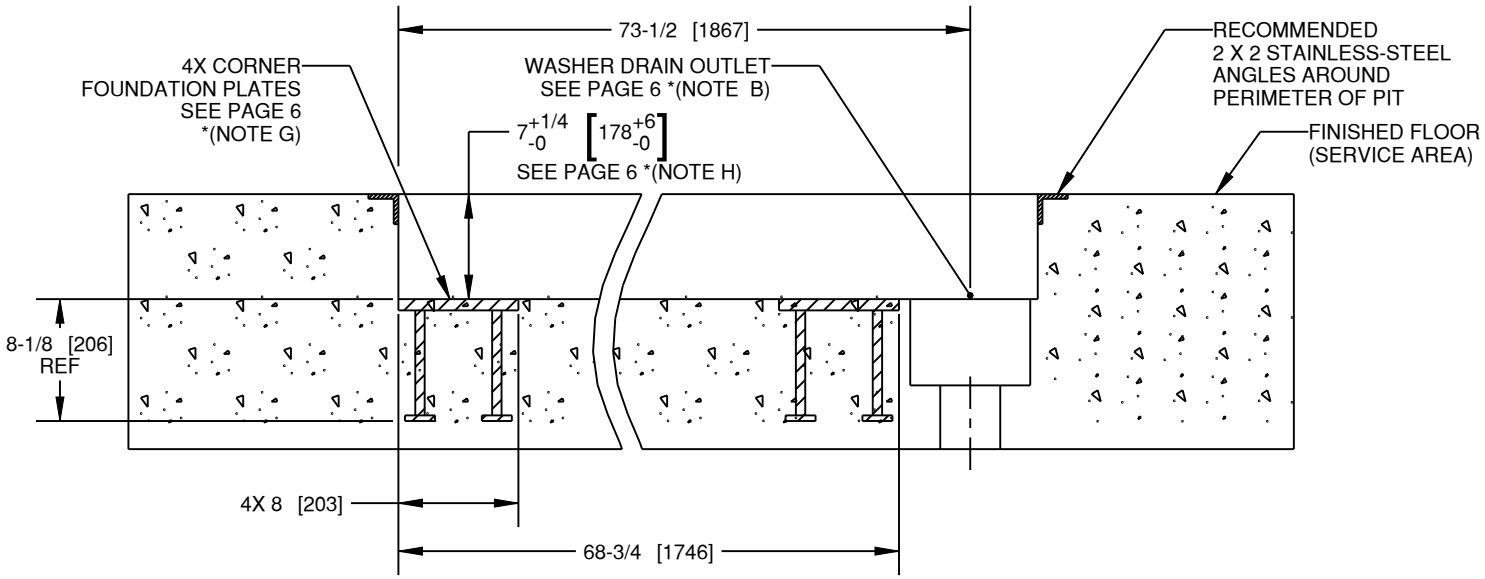
STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

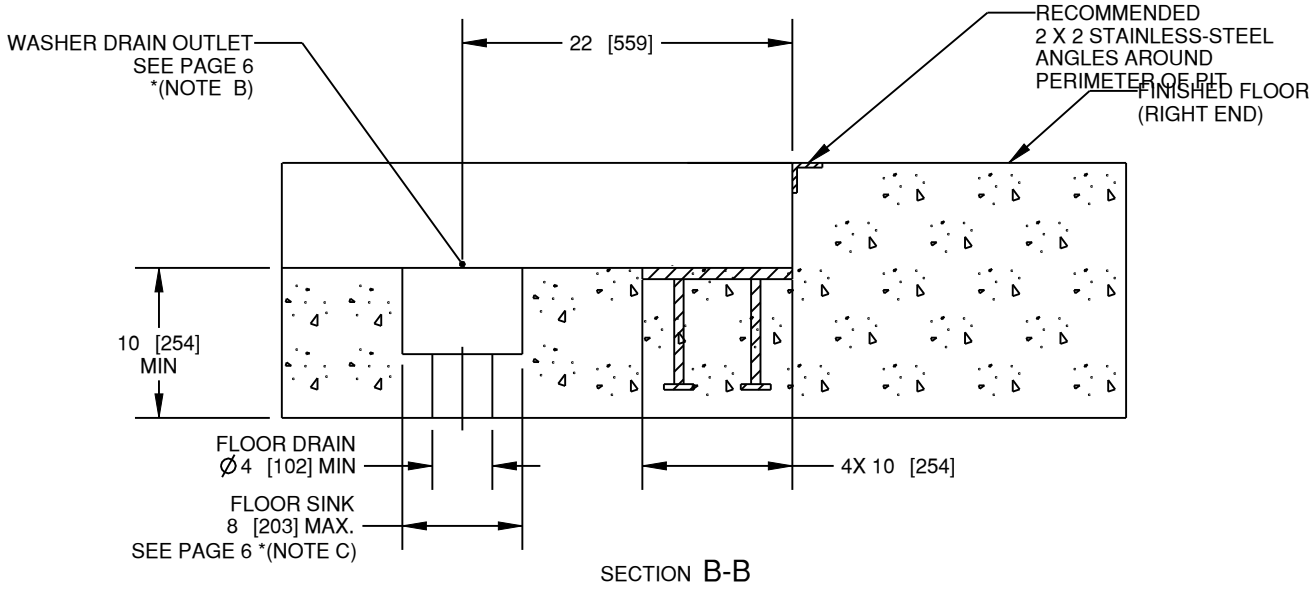
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	920513916.K

Released

CONSTRUCTION WITH SEISMIC ANCHORAGE (SEE REPORT #11863511 AGAINST CBC-2019) 2/2



SECTION A-A



SECTION B-B

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

920513916.K

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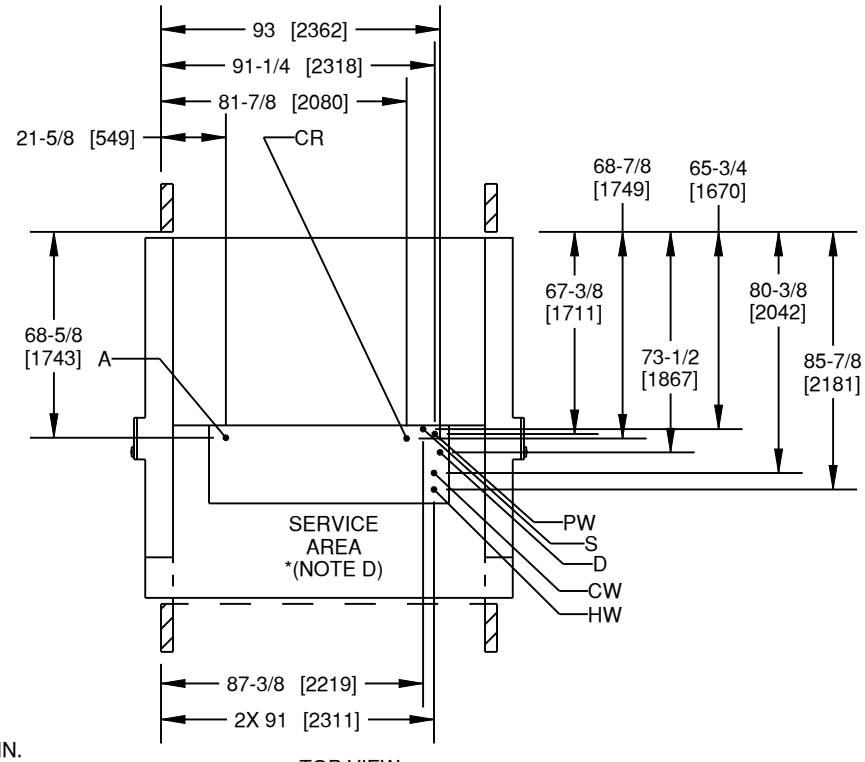
UTILITY (PLUMBING) CONNECTION POSITION

HW	HOT WATER
CW	COLD WATER
PW	PURE WATER (OPTION)
A	COMPRESSED AIR
D	FLOOR DRAIN LOCATION *(NOTE F)
S	STEAM *(NOTE C)
CR	CONDENSATE RETURN

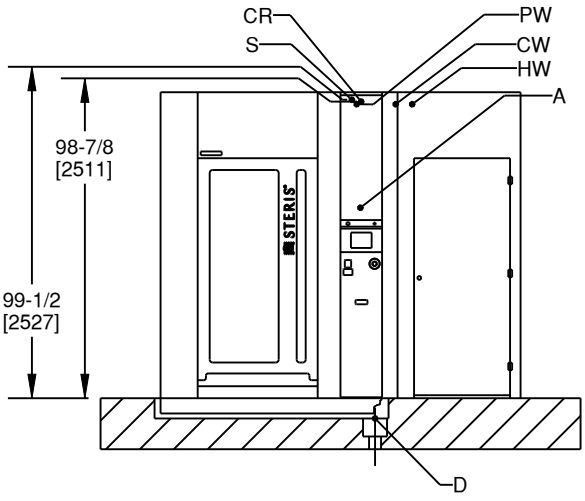
RELAY	FUNCTION SEE PAGE 9 *(NOTE B)
CR10	HOT WATER REQUEST
CR11	PURE WATER REQUEST
CR12	COLD WATER REQUEST

NOTES:

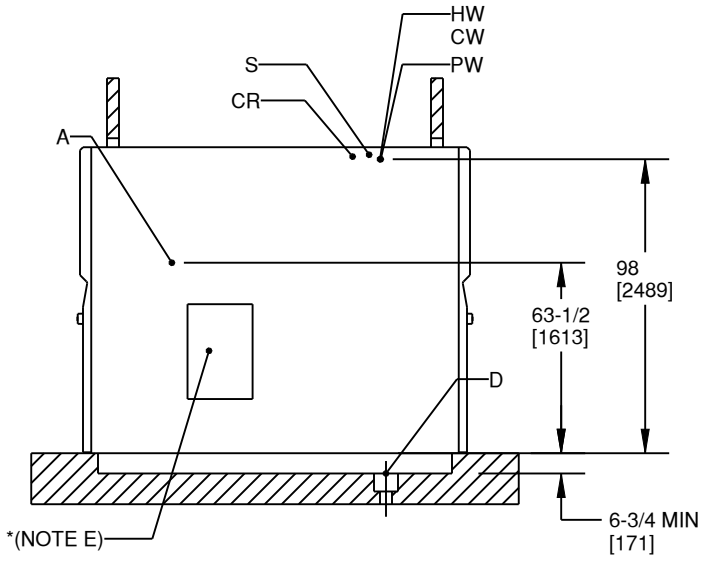
(A) ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES.
(B) EXTERNAL ISOLATION VALVES, UNIONS, VACUUM BREAKERS ON UTILITY LINES TO WASHER ARE NOT PROVIDED BY STERIS.
(C) ALL OVER PRESSURE DEVICES TO CONTROL PRESSURE OF STEAM, WATER AND AIR ARE NOT INCLUDED. IT IS RESPONSIBILITY OF CUSTOMER TO INSTALL THOSE EQUIPMENT ON MAIN UTILITIES.
(D) DO NOT PLACE PIPING IN SERVICE ACCESS AREA.
(E) SIGNAL AVAILABLE FOR WATER REQUEST INSIDE ELECTRICAL BOX.
(F) WASHER DRAIN OUTLET MAY NOT ALIGN PERFECTLY WITH CENTER OF FLOOR SINK. EDGES OF FLOOR SINK MUST BE AT LEAST 1 in [25 mm] FROM THE WASHER DRAIN.
(G) AIR LINE, ELECTRICAL CONDUIT, DUCT WORK, STEAM PIPING, CONDENSATE RETURN PIPING AND WATER PIPING SHOULD BE ROUTED ABOVE WASH CHAMBER TO AVOID INTERFERING WITH SERVICE OF COMPONENTS ON WASHER ROOF.



TOP VIEW



FRONT VIEW



SIDE VIEW

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	920513916.K

Released

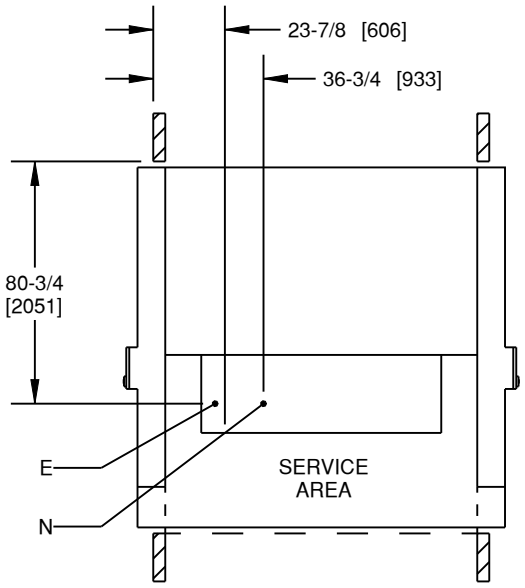
UTILITY (ELECTRICITY) CONNECTION POSITION

E	ELECTRICAL
N	NETWORK

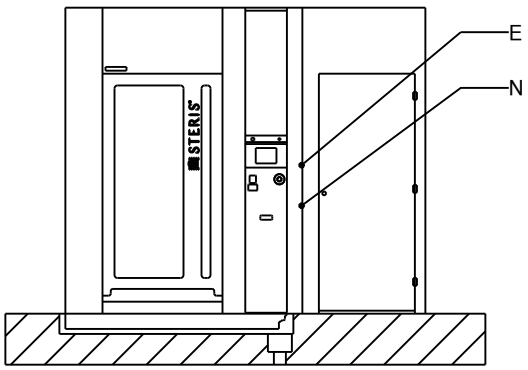
RELAY	FUNCTION *(NOTE B)
CR5	CYCLE IN OPERATION
CR6	LOW VENTILATION REQUEST
CR7	HIGH VENTILATION REQUEST
CR8	ALARM
CR9	CYCLE COMPLETE
CR10	HOT WATER REQUEST
CR11	PURE WATER REQUEST
CR12	COLD WATER REQUEST

NOTES:

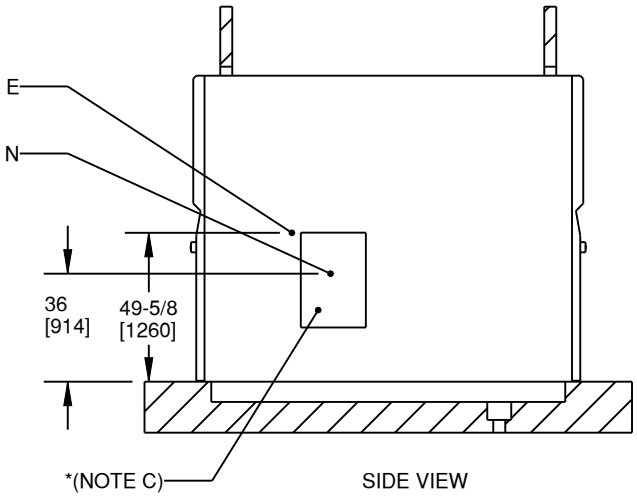
(A) ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES.
(B) AUXILIARY DRY CONTACTS FOR CUSTOMER UTILITY CONTROL AVAILABLE INSIDE CONTROL BOX. SEE ELECTRICAL SCHEMATIC: #10132900
(C) FOR STANDARD THROUGH-WALL UNIT, CLEARANCE BETWEEN CLOSED DOOR OF ELECTRIC CABINET AND FACILITY WALL, OR ANY OPPOSING FIXTURE, MUST MEET LOCAL CODES.
(D) STERIS RECOMMENDS A LIGHT IN SERVICE AREA ALONG WITH A PROVISION OF AN ELECTRICAL OUTLET FOR MAINTENANCE.



TOP VIEW



FRONT VIEW



SIDE VIEW

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

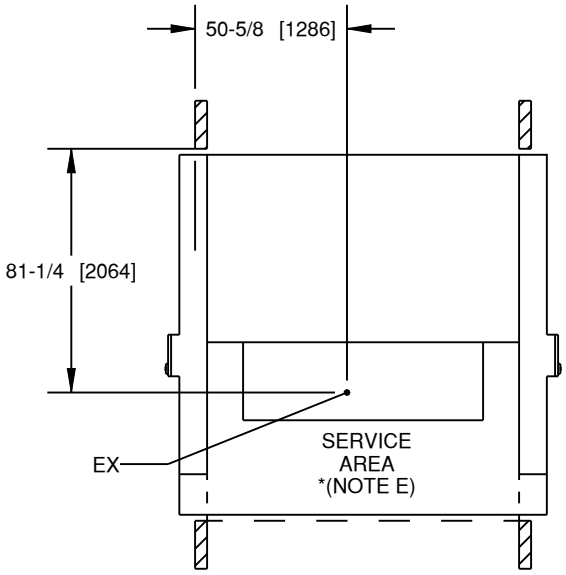
920513916.K

Released

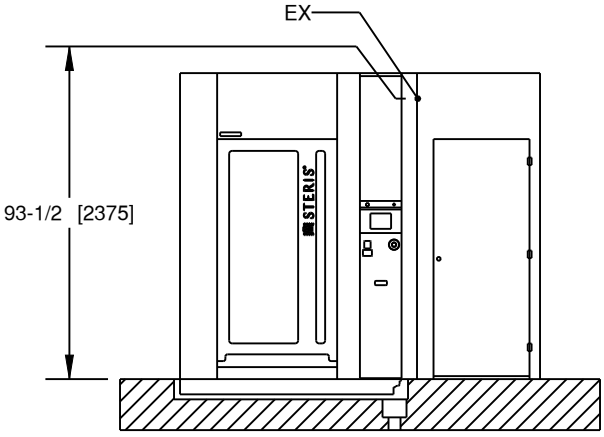
UTILITY (VENTILATION) CONNECTION POSITION

EX	VENTILATION

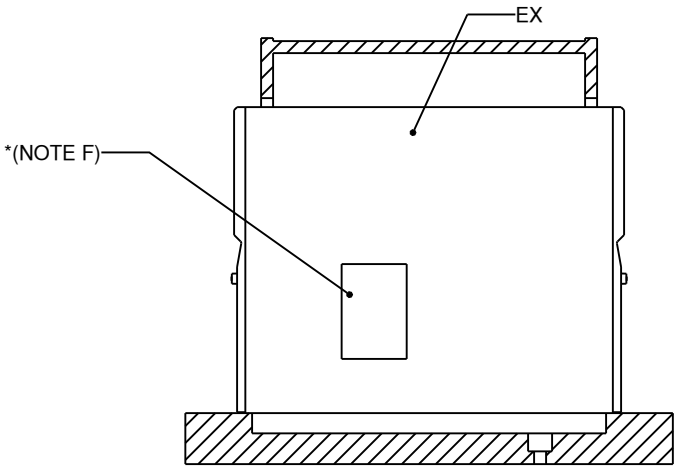
RELAY	FUNCTION *(NOTE F)
CR5	CYCLE IN OPERATION
CR6	LOW VENTILATION REQUEST (250 SCFM)
CR7	HIGH VENTILATION REQUEST (1000 SCFM)



TOP VIEW



FRONT VIEW



SIDE VIEW

NOTES:
(A) INSTALLATION OF EXTERNAL DUCTING FROM WASHER EXHAUST FAN TO THE EXTERIOR OF THE BUILDING (NOT BY STERIS) MUST NOT EXCEED 1 in H2O IN PRESSURE LOSS TO ENSURE OPTIMAL DRYING PERFORMANCE OF THE WASHER AND FAN MOTOR EFFICIENCY. IF PRESSURE LOSS OF EXTERNAL DUCTING EXCEEDS 1 in H2O, AN EXTERNAL FAN MUST BE INSTALLED TO COMPENSATE (NOT BY STERIS).
(B) BUILDING DUCT MUST BE SCALED UP TO 10 in [254 mm] O.D. MINIMUM AS CLOSE AS POSSIBLE TO WASHER DUCT CONNECTION (ADAPTOR FROM 6 in [152 mm] TO BUILDING DUCT O.D. NOT PROVIDED BY STERIS).
(C) FACILITY ROOM VENTILATION MUST COMPENSATE FOR WASHER EXHAUST FLOW RATE.
(D) STERIS DOES NOT RECOMMEND INSTALLATION OF SPRINKLER OVER THE UNIT, BUT IF REQUIRED BY LOCAL CODE IT MUST BE FUSED TO 260° F [126° C] OR ABOVE. ANY SPRINKLER HEADS IN FRONT OF THE LOAD/UNLOAD DOORS MUST ALSO BE FUSED TO 260° F [126° C] OR ABOVE.
(E) DO NOT PLACE DUCT WORK TO INTERFERE WITH SERVICE ACCES AREA.
(F) SIGNAL AVAILABLE FOR EXTERNAL VENTILATION CONTROL INSIDE ELECTRICAL BOX.

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR

STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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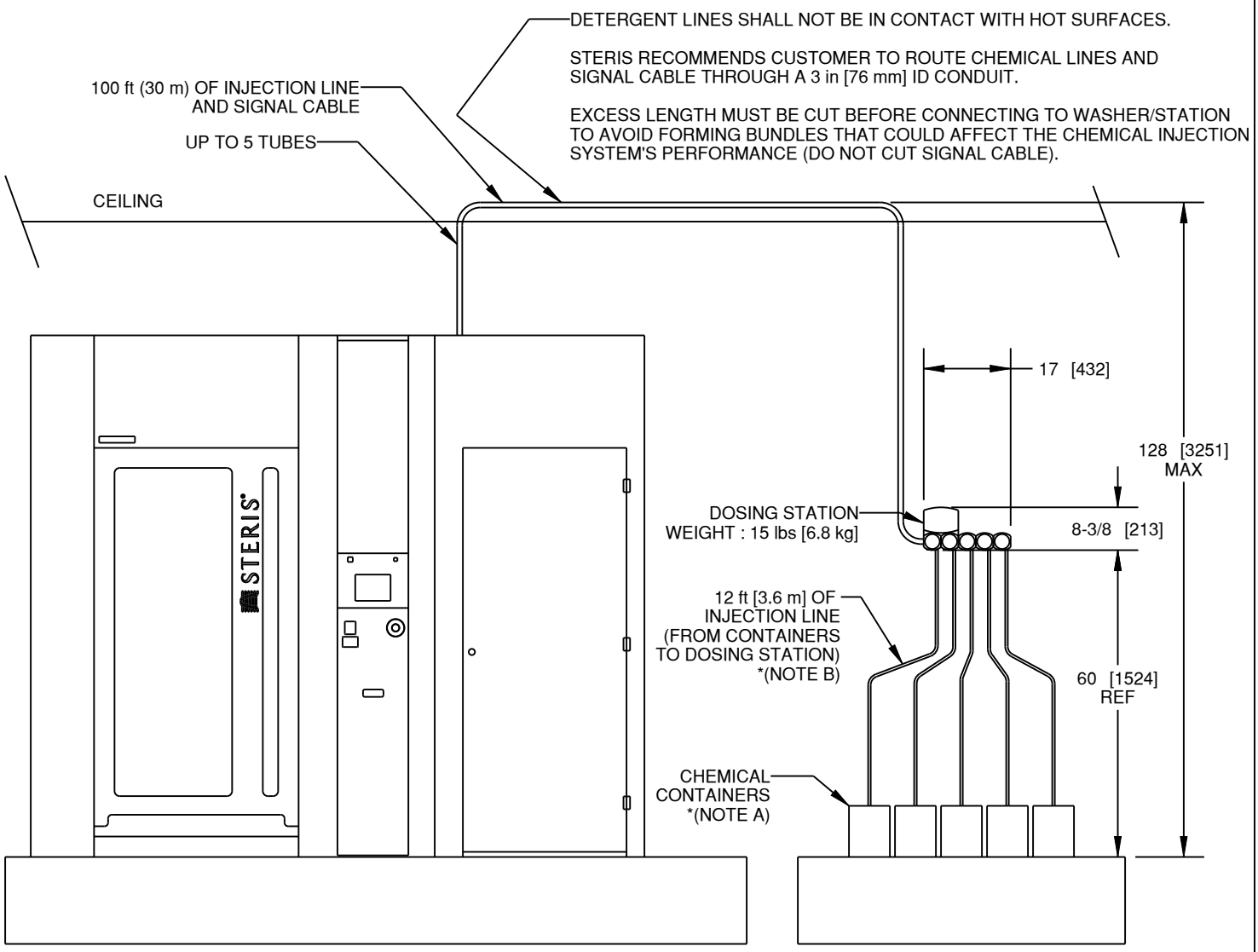
DOSING STATION



FRONT VIEW

CONSUMPTION / CYCLE		CYCLES	STANDARD	DECONTAM	INSTRUMENT (OPTIONAL)
CHEMICAL (CH)	ENZYME (OPTIONAL)	ALL	N/A	N/A	2.5 oz @ 1/10 oz/gal [76 ml @ 0.8 ml/L]
	DETERGENT	FIRST	2.5 oz @ 1/10 oz/gal [76 ml @ 0.8 ml/L]	N/A	2.5 oz @ 1/10 oz/gal [76 ml @ 0.8 ml/L]
		CONSECUTIVE	0.7 oz @ 1/10 oz/gal [21.6 ml @ 0.8 ml/L]	N/A	N/A
	RINSE AID	FIRST	0.5 oz @ 1/50 oz/gal [15 ml @ 0.16 ml/L]	N/A	N/A
		CONSECUTIVE	0.14 oz @ 1/50 oz/gal [4.3 ml @ 0.16 ml/L]	N/A	N/A
	DESCALER	ALL	N/A	50 oz @ 2 oz/gal [1520 ml @ 16 ml/L]	N/A

*NOTES:

(A) DOSING STATION AND CHEMICAL CONTAINERS MUST BE ON THE SAME FLOOR OF THE BUILDING AS THE WASHER/DISINFECTOR. CHEMICAL CONTAINER MUST BE LOCATED AT A LOWER HEIGHT THAN DOSING STATION. MAXIMUM CONTAINER INCLINATION IS 15 DEG FROM FLOOR. AMBIENT TEMPERATURE SHALL NOT EXCEED 32°C (90°F)

(B) HP PICKUP TUBE SYSTEM CAN PROVIDE UP TO TWO WASHERS WITH CHEMISTRY FROM THE SAME CONTAINER.

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR

STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
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UTILITY REQUIREMENTS CHART (PLUMBING)

UTILITY	PARAMETER	REQUIREMENT	✓
HOT WATER (HW) *(NOTE 6)	CONNECTION SIZE / TYPE	1 in / FEMALE NPT 1 in / MALE BSPT	
	PRESSURE RANGE	15 - 50 psig DYNAMIC [103-345 kPa] MAX. 90 psig STATIC [620 kPa]	
	OPERATING FLOW RATE	19 US GPM [72 L/min] AT 15 psig [103 kPa] TO 35 US GPM [132 L/min] AT 50 psig [345 kPa]	
	TOTAL CONSUMPTION FOR STANDARD CYCLE	FIRST CYCLE: 50 US GAL [189 L] (25 US GAL [95 L] PER PHASE) CONSECUTIVE CYCLES: 14 US GAL [53 L] (7 US GAL [27 L] PER PHASE)	
	TEMPERATURE RANGE	110°F [43°C] TO 150°F [65.5°C]	
	WATER QUALITY	HARDNESS (CaCO3) : 50-80 ppm (MAX. 120 ppm)	
COLD WATER (CW) *(NOTE 7-8-11)	CONNECTION SIZE / TYPE	1 in / FEMALE NPT 1 in / MALE BSPT	
	PRESSURE RANGE	30 - 50 psig DYNAMIC [206-345 kPa] MAX. 90 psig STATIC [620 kPa]	
	OPERATING FLOW RATE	30 US GPM [114 L/min] AT 30 psig [206 kPa] TO 38.5 US GPM [146 L/min] AT 50 psig [345 kPa]	
	TOTAL CONSUMPTION FOR STANDARD CYCLE	FIRST CYCLE: 0 US GAL [0 L] CONSECUTIVE CYCLES: 0 US GAL [0 L]	
	TOTAL CONSUMPTION FOR DRAIN COOLING	IF RECYCLING: 7 US GAL [26] NOT RECYCLING: 46 US GAL [175 L]	
	TEMPERATURE RANGE	40 - 70°F [4.4 - 21°C] MAXIMUM	
	WATER QUALITY	HARDNESS (CaCO3) : 50-80 ppm (MAX. 120 ppm)	
PURE WATER (PW) *(NOTE 9 - 10)	CONNECTION SIZE / TYPE	3/4 in / FEMALE NPT 3/4 in / MALE BSPT	
	PRESSURE RANGE	5 - 50 psig DYNAMIC [34 - 340 kPa] MAX. 90 psig STATIC [620 kPA]	
	OPERATING FLOW RATE	12 US GPM [45 L/min] AT 5 psig [34 kPa] TO 28 US GPM [106 L/min] AT 50 psig [345 kPa]	
	TOTAL CONSUMPTION FOR STANDARD CYCLE	FIRST CYCLE: 0 US GAL [0 L] CONSECUTIVE CYCLES: 0 US GAL [0 L]	
	TEMPERATURE RANGE	150°F [65.5°C] MAXIMUM	
	RESISTIVITY (CONDUCTIVITY)	0.5-0.1 MΩ -cm [2-10 µS/cm]	
	pH	6.8 - 7.5	

NOTES

1. INSTALLATION OF A WATER HAMMER ARRESTOR (NOT PROVIDED BY STERIS) IS RECOMMENDED.
2. CUSTOMER MUST PROVIDE UTILITY CONNECTIONS WITH SHUTOFFS DISCONNECTS WITHIN 2 FEET OF THE CONNECT LOCATION AND BELOW THE CEILING DECK.
3. OPTIMAL WASHER PERFORMANCES OBTAINED WHEN UTILITIES ARE PROVIDED AT MAXIMUM VALUE OF RANGES.
4. OPTIMAL CLEANING EFFICIENCY WHEN HOT WATER IS AT A MAXIMUM OF 135° F [57.2° C].
5. IF CYCLE WASH PHASE SET POINT TEMPERATURE IS SET HIGHER THAN 140° F [60° C], CONSUMPTION FOR DRAIN COOLING IS DOUBLED.
6. DEFAULT VALIDATED INSTRUMENT CYCLE HOT WATER CONSUMPTION IS: 75 US gal [284 L]. THIS CONSUMPTION MAY BE REDUCED BY THE USE OF PURE WATER FOR RINSE AND/OR THERMAL RINSE PHASES.
7. IF DRAIN COOLING SYSTEM IS ENABLED, COLD WATER MAXIMUM FLOW RATE IS INCREASED TO: 60 US gpm [227 L/min]
8. DEFAULT VALIDATED INSTRUMENT CYCLE COLD WATER CONSUMPTION IS: 50 US gal [189 L].
9. STANDARD VALIDATED CYCLES CAN BE SET TO USE PW FOR THERMAL RINSE PHASE. THEN, HW CONSUMPTION FOR THIS PHASE WILL BE REPLACED BY PW.
10. VALIDATED INSTRUMENT CYCLES CAN BE SET TO USE PW FOR RINSE AND/OR THERMAL RINSE PHASES. THEN, HW CONSUMPTION FOR THESE PHASES WILL BE REPLACED BY PW AT A RATE OF 25 US gal [95 L] PER PHASE.
11. IF ACCESSORY CONDENSATE RETURN TO DRAIN (FD479) IS PRESENT, REFER TO THE SECTION *ADDITIONAL COLD WATER* AT THE END OF THIS TABLE FOR ADDITIONAL CONSUMPTION.

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF
VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR

STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	

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UTILITY REQUIREMENTS CHART (PLUMBING)

UTILITY	PARAMETER	REQUIREMENT	√	NOTES
COMPRESSED AIR (A)	CONNECTION SIZE / TYPE	1/2 in / FEMALE NPT 1/2 in / MALE BSPT		1. AIR PURITY PER ISO-8573-1:2010 [7:4:4] MAX. PARTICULATE DENSITY: 10 mg/m³ MAX. DEW POINT FOR WATER CONTENT: 3°C [37°F] MAX. OIL CONCENTRATION FOR THE OIL CONTENT: 5 mg/m³ 2. STERIS RECOMMENDS A REFRIGERATED AIR DRYER WHERE ENVIRONMENTAL DEW POINT CONDITIONS ARE HIGHER THAN RECOMMENDED (CONTACT STERIS SALES REPRESENTATIVE). 3. STERIS RECOMMENDS A MAXIMUM 8 in [203 mm] ROUND OR SQUARE FLOOR SINK BY 6 in [152 mm] DEEP. 4. IF DRAIN COOLING SYSTEM IS ENABLED, DRAIN MAXIMUM FLOW RATE IS INCREASED TO: 120 US GPM [454 L/min] 5. MAXIMUM FLOW RATE OCCURS AT RESERVOIR COMPLETE DRAINING (EX: POWER OFF). IT WILL BE MAINTAINED FOR A MAXIMUM OF: 50 SECONDS FOR UNITS WITH 2 RESERVOIRS; 75 SECONDS FOR UNITS WITH 3 RESERVOIRS. 6. STERIS REQUIRES CLEAN AND AT LEAST 97% SATURATED DRY STEAM. 7. PROPER OPERATION OF THE WASHER REQUIRES A MINIMUM DYNAMIC PRESSURE DIFFERENTIAL OF 21.5 psig [148 kPa] BETWEEN STEAM INLET AND CONDENSATE RETURN. 8. PEAK OPERATING FLOW RATES OCCUR WHEN RECIRCULATION HEATER AND RESERVOIR HEATER ARE ACTIVATED AT THE SAME TIME. IT WILL BE MAINTAINED FOR A MAXIMUM OF 90 SECONDS. 9. STERIS REQUIRES A LOW PRESSSURE CONDENSATE RETURN SYSTEM. 10. FLOW RATE IS ADJUSTED WITH THE MANUAL VALVE FOLLOWING INSTALLATION INSTRUCTION OF THE ACCESSORY FD479. 11. NO ADDITIONAL CONNECTION REQUIRED, THE ACCESSORY CONNECTS TO THE EXISTING COLD WATER PLUMBING ON THE WASHER.
	PRESSURE RANGE	MIN. 80 psig DYNAMIC [552 kPa] MAX. 125 psig STATIC [860 kPa]		
	OPERATING FLOW RATE	6 SCFM [170 L/min]		
DRAIN (D)	CONNECTION SIZE / TYPE *(NOTE 3)	4 in [101 mm] OD		
	OPERATING FLOW RATE *(NOTE 4 - 5)	MAX. 60 US GPM [227 L/min]		
STEAM INLET (S)	CONNECTION SIZE / TYPE	1 1/2 in / FEMALE NPT 1 1/2 in / MALE BSPT		
	PRESSURE RANGE	30 - 80 psig DYNAMIC [206-552 kPa] MAX. 90 psig STATIC [620 kPa]		
	OPERATING MASS FLOW RATE	PEAK 900 lb/h [409 kg/h] AT 30 psig [207 kPa] PEAK 1400 lb/h [636 kg/h AT 80 psig [550 kPa]		
	TOTAL CONSUMPTION FOR STANDARD CYCLES	FIRST CYCLE: 44 lb [20.0 kg] CONSECUTIVE CYCLES: 39 lb [17.7 kg]		
CONDENSATE RETURN (CR)	CONNECTION SIZE / TYPE	1 in / FEMALE NPT 1 in / MALE BSPT		
	PRESSURE RANGE	MAX. 8.5 psig [58.6 kPa] STATIC		
	OPERATING FLOW RATE	PEAK : 2.9 US GPM [11 L/min]		
ADDITIONAL COLD WATER FOR CONDENSATE RETURN TO DRAIN (FD479)	CONNECTION SIZE / TYPE *(NOTE 11)	NA		
	OPERATING FLOW RATE *(NOTE 10)	11 US GPM [42 L/min]		
	CONSUMPTION FOR STANDARD CART CYCLE	73 US GAL [276 L]		
	CONSUMPTION FOR STANDARD INSTRUMENT CYCLE	255 US GAL [965 L]		

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	920513916.K

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UTILITY REQUIREMENTS CHART (ELECTRIC)

UTILITY		PARAMETER AND REQUIREMENT			✓	NOTES
		CONNECTION SIZE/TYPE	NOMINAL AMPERAGE	RECOMMENDED CIRCUIT		
ELECTRICITY (EL)	200-208V 50 Hz, 3-Ph	1 - 1 1/4 in [35 - 44 mm] CONDUIT	27.5A	40A		1. ALL CONNECTIONS SHOULD BE IN ACCORDANCE WITH LOCAL CODES. 2. NEUTRAL WIRE NOT REQUIRED. 3. ALWAYS FOLLOW LOCAL ELECTRICAL CODES AND SAFETY-RELATED WORK PRATICES TO DETERMINE THE VALUE OF PROTECTION. 4. WIRING ON THE EQUIPMENT TERMINATES AT A JUNCTION BOX. WIRING BETWEEN JUNCTION BOX AND BUILDING SERVICE LINES ARE NOT SUPPLIED BY STERIS. 5. DISCONNECT SWITCHES WITH OFF POSITION LOCKOUT (SUPPLIED BY OTHERS) MUST BE INSTALLED IN ELECTRIC SUPPLY LINES NEAR THE EQUIPMENT. 6. BREAKERS NOT PROVIDED BY STERIS 7. MAIN SUPPLY TERMINAL BLOCK WIRE SIZE: 6 AWG MAX. 8. PROTECTIVE EARTH TERMINAL BLOCK WIRE SIZE: 4 AWG MAX. 9. NETWORK CONNECTION (IF APPLICABLE): -ACTIVE NETWORK DROP WITH CAT 5/6 CABLE WITHIN 10FT [3M] OF UNIT -STATIC OR DHCP RESERVED IP ADDRESS (FOR EACH UNIT) -NETWORK CABLE SUPPLIED BY FACILITY
	460-480V 60 Hz, 3-Ph	1 - 1 1/4 in [35 - 44 mm] CONDUIT	13.5A	20A		
	380-400V 60 Hz, 3-Ph	1 - 1 1/4 in [35 - 44 mm] CONDUIT	15A	20A		
	380-400-415V 50 Hz, 3-Ph	1 - 1 1/4 in [35 - 44 mm] CONDUIT	14.5A	20A		
NETWORK (N) *(NOTE 9)		100/1000 BASE T SUPPORTING TCP/IP PROTOCOL RJ45F CONNECTION				

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

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UTILITY REQUIREMENTS CHART

UTILITY	PARAMETER	REQUIREMENT	✓	NOTES
VENTILATION EXHAUST (EX)	CONNECTION SIZE / TYPE *(NOTE 1)	6 in [152 mm] OUTSIDE DIAMETER		1. BUILDING DUCT MUST BE SCALED UP TO 10 in [254 mm] O.D. MINIMUM AS CLOSE AS POSSIBLE TO WASHER DUCT CONNECTION (ADAPTOR FROM 6 in [152 mm] TO BUILDING DUCT O.D. NOT PROVIDED BY STERIS) 2. FOR ALL VENTILATION DUCTING FROM WASHER, STERIS RECOMMENDS THE INSTALLATION OF A DEDICATED CORROSION-PROOF AND WATERTIGHT DUCT RATED TO AN OPERATING TEMPERATURE OF 210° F [99° C] OR MORE TO THE EXTERIOR OF THE BUILDING, SLOPED TOWARD THE WASHER AND FREE OF DEAD LEGS. 3. INTERNAL DRYING AND EXHAUST FANS PRODUCE 950 SCFM AND BUILDING EXHAUST NEEDS TO EXHAUST AT THE RATE OF 1000 SCFM.
	PRESSURE DROP OF BUILDING VENTILATION DUCT WORK	< 1 in H2O @ 1000 scfm		
	OPERATING FLOW RATE *(NOTE 3)	VAPOR EXHAUST AND DRYING: 1000 scfm [28.31 m^3/min] WASH AND RINSE: 250 scfm [7.07 m^3/min]		
	TEMPERATURE RANGE	MAX. 212°F [100°C]		

PHYSICAL SPECIFICATIONS

PARAMETER	SPECIFICATION	NOTES
OPENING AREA FROM CLEAN SIDE TO SERVICE AREA	LESS THAN 30 in^2 [19354 mm^2]	
CHAMBER INTERNAL DIMENSIONS W x H x L	59 ½ in X 88 in X 106 in [1511 mm X 2235 mm X 2692 mm]	
CHAMBER INTERNAL VOLUME	321 ft^3 [9.1 m^3]	
NOISE LEVEL: A-WEIGHTED EQUIVALENT SURFACE SOUND PRESSURE LEVEL	65 dB (A)	AS PER ISO 3746
PERMISSIBLE ENVIRONMENT	INDOOR USE ONLY: - ALTITUDE OF OPERATION UP TO 6560 ft (2000 m); - TEMPERATURE OF 41 TO 104° F (5 TO 40° C); - MAXIMUM RELATIVE HUMIDITY IS 80% FOR TEMPERATURES UP TO 88° F (31° C) DECREASING LINEARLY TO 50% RELATIVE HUMIDITY AT 104° F (40° C); - POLLUTION DEGREE 2: EQUIPMENT MUST BE INSTALLED IN AN ENVIRONMENT WHERE NORMALLY ONLY NON-CONDUCTIVE POLLUTION OCCURS BUT WHERE OCCASIONAL, TEMPORARY CONDUCTIVITY CAUSED BY CONDENSATION CAN BE EXPECTED.	AS DETERMINED ACCORDING TO INTERNATIONAL STANDARD EN/IEC 61010-1, SECOND EDITION

HEAT LOSS

AVERAGE STANDARD VALIDATED CYCLE WITH ROOM @ 75° F [24° C]

TOTAL HEAT LOSS	FREE-STANDING INSTALLATION (ONE WALL)		THROUGH-WALLS INSTALLATION (TWO WALLS)	
	FRONT OF WALL	BACK OF WALL	AT EACH END	BETWEEN WALLS
13800 Btu/h [4039 W]	4000 Btu/h [1171 W]	9800 Btu/h [2868 W]	4000 Btu/h [1171 W]	5800 Btu/h [1697 W]

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
A	N/A	Michel Blouin	920513916	920513916.K

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PHYSICAL REQUIREMENTS

ITEM	REQUIREMENTS	SPECIFICATIONS OR REFERENCE	✓
TRANSPORT	VERIFY THAT HALLS, DOORS, ELEVATORS AND ALL OTHER ENTRANCES MEET WEIGHT AND DIMENSIONAL CLEARANCE SPECIFICATIONS:		
	ACCESS TO INSTALLATION SITE	ACCESSIBLE BY PALLET JACK AND/OR FORK LIFT.	
	SHIPPING WEIGHT AND DIMENSIONS (W x H x L)	CRATE A: 2360 lb [1070.5 kg] 49 x 83 x 121 in [1245 x 2108 x 3074 mm]	
		CRATE B: 2120 lb [962 kg] 49 x 66 x 121in [1245 x 1677 x 3074mm]	
		CRATE C1: 1495 lb [678 kg] 37 x 91 x 71 in [940 x 2311 x 1803 mm]	
		CRATE C2: 690lb [313 kg] 37 x 88 x 40 in [940 x 2235 x 1016 mm]	
		CRATE D: 1415lb [642 kg] 49 x 51 x 121 in [1245 x 1296 x 3074 mm]	
		CRATE E: 400 lb [182 kg] 41 x 68 x 73 in [1042 x 1727x 1855 mm]	
	LARGEST UNCRATED PIECE: WEIGHT AND DIMENSIONS (W x H x L)	SUMP (CRATE A): WEIGHT: 436 lb [198 kg] 71 x 7 x 113 in [1803 x 178 x 2870 mm]	
	HEAVIEST UNCRATED PIECE: WEIGHT AND DIMENSIONS (W x H x L)	RESERVOIR MECHANICAL CORE (CRATE C1): MAXIMUM WEIGHT: 1000 lb [454 kg] 21 x 68 x 44 in [533 x 1727 x 1117 mm]	
WALLS AND CEILING	VERIFY THAT WALLS AND CEILING MEET DIMENSIONAL AND POSITION REQUIREMENTS:		
	WALL OPENING DIMENSIONS AND CEILING HEIGHT	SEE PAGE 1 AND 2	
	SERVICE AREA CLEARANCE	SEE PAGE 1 AND 2	
	FIRE PREVENTION DEVICES	STERIS DOES NOT RECOMMEND INSTALLATION OF SPRINKLER OVER THE UNIT BUT IF REQUIRED BY LOCAL CODE IT MUST BE FUSE TO 260° F (126° C) OR ABOVE. ANY SPRINKLER HEADS IN FRONT OF THE LOAD/UNLOAD DOORS MUST ALSO BE FUSE TO 260° F (126° C) OR ABOVE.	
FLOOR	VERIFY THAT FLOOR AND PIT MEET DIMENSIONAL AND CONSTRUCTION REQUIREMENTS:		
	MAXIMUM OPERATING WEIGHT (WATER AND TWO HEAVY CASE CARTS)	LOADED FREE-STANDING UNIT: 7266 lb [3296 kg]	
		LOADED THROUGH-WALLS UNIT: 6150 lb [2790 kg]	
	AVERAGE FLOOR LOAD OVER WASHER FOOTPRINT	0.49 psi [3.38 kPa]	
	MAX. FLOOR LOAD AT WASHER FOOT PADS (1 ½ in [38 mm] DIAMETER PADS)	SUMP, NON-SERVICE SIDE (2): 490 psi [3378 kPa] SUMP, SERVICE SIDE (2): 1275 psi [8791 kPa] MECHANICAL CORE (4): 280 psi [1930 kPa]	
	PIT DIMENSIONS	SEE PAGE 4 & 5 FOR STANDARD PIT MOUNTED UNIT SEE PAGE 6 & 7 FOR PIT MOUNTED UNIT WITH SEISMIC	
	CORNER LEVELING PADS/ FOUNDATION PLATES POSITION		
	FLOOR DRAIN DIMENSIONS AND POSITION		
	FLOOR CLEARANCE FOR INSTALLATION	SEE PAGE 1-2	

STERIS Corporation

TITLE: EQUIPMENT DRAWING OF VISION® 1327 CART AND UTENSIL WASHER/DISINFECTOR STEAM HEATED, PIT MOUNTED UNIT

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER & REVISION
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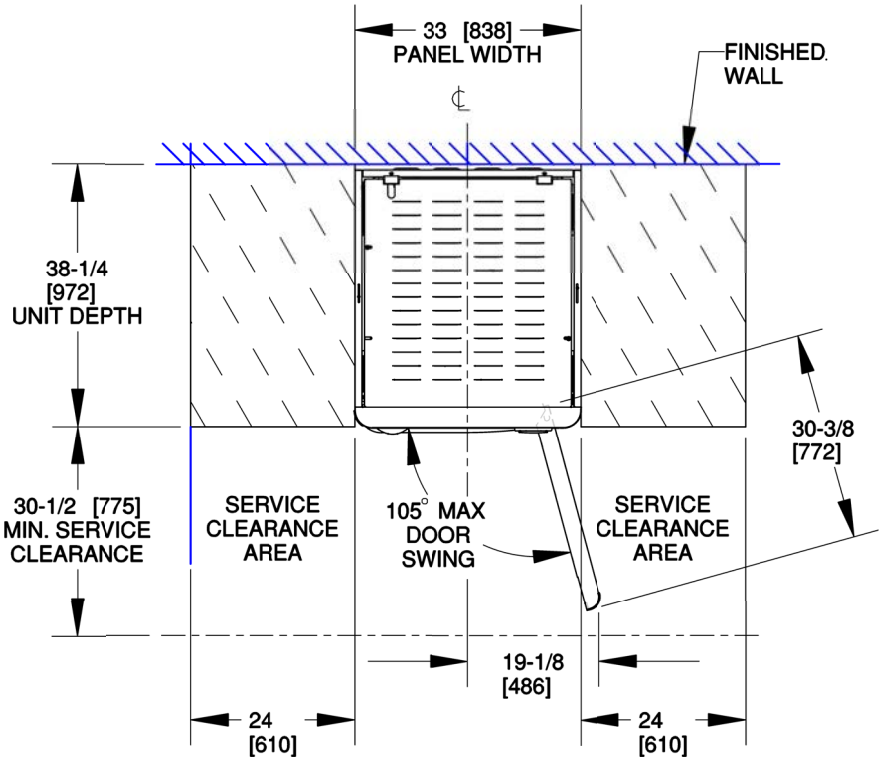
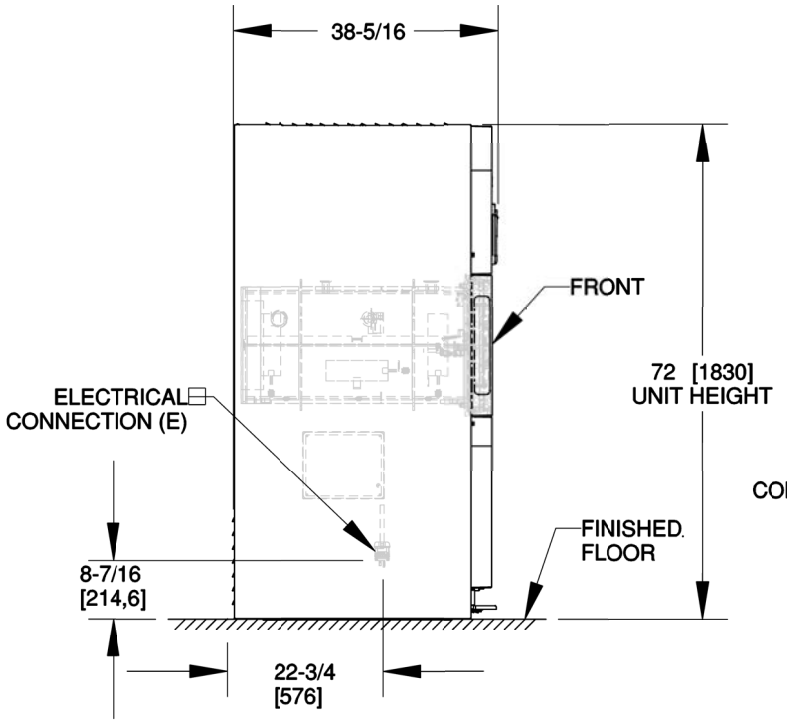
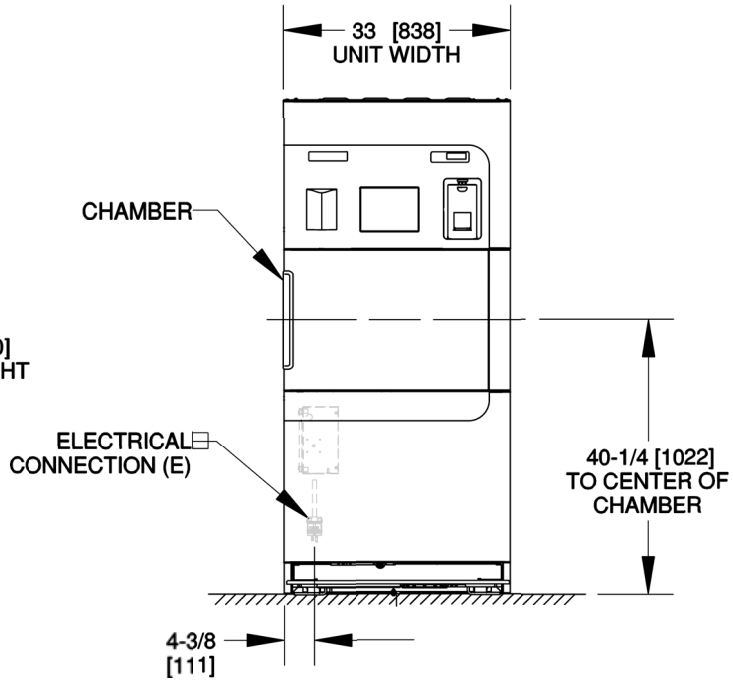


TOP VIEW



SIDE VIEW



FRONT VIEW

STERIS Corporation

TITLE: SINGLE DOOR CABINET EQUIPMENT DRAWING
AMSCO V-PRO MAX 2

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	Lambert, Sean	10251899 D.5	10091243	D

AMSCO V-PRO MAX 2

UTILITY REQUIREMENTS CHART

UTILITY	PARAMETER	REQUIREMENT	NOTES
ELECTRICAL (E)	DOMESTIC 200-230 VOLTS, 50/60HZ THREE PHASE	CURRENT 16 AMPS, MIN. CIRCUIT BREAKER 20 AMPS, USE NEMA L15-20R PLUG	1. PROVIDE GROUPED OR GANGED CIRCUIT PROTECTION AND DISCONNECT FOR (3) PHASE POWER AS REQUIRED BY NEC AND LOCAL CODES. INDIVIDUAL POWER SHUTOFFS RECOMMENDED NEAR EACH MACHINE FOR SERVICING. 2. PROVIDE GROUNDED METAL CONDUIT AND WIRING BETWEEN EQUIPMENT TERMINALS AND STUB OUTS OR DISCONNECTS. 14 AWG MINIMUM SIZE RECOMMENDED. 3. 10 FT. POWER CORD INCLUDED
	INTERNATIONAL 380-415 VOLTS, 50/60HZ THREE PHASE	CURRENT 10 AMPS, MIN. CIRCUIT BREAKER 12 AMPS, USE NEMA L15-20R PLUG	

PHYSICAL SPECIFICATIONS

SHIPPING WEIGHT, (APPROX)	1020 LBS. (463 KG.)
MAXIMUM OPERATING WEIGHT, BASED ON CHAMBER FULLY LOADED	920 LBS. (417 KG.)
SHIPPING DIMENSIONS W x L x H	49-1/2 X 61 X 87-3/4 (1257.3 X 1549.4 X 2228.85)
OUTSIDE DIMENSIONS W x L x H	33 X 38-5/16 X 72 (838 X 973 X 1829)
CHAMBER DIMENSIONS W x L x H	17 X 32-1/2 X 15 (432 X 381 X 826)
HEAT LOSS AT 70° F (21° C)	1500 BTU/HR
A-WEIGHTED SOUND POWER LEVEL	72.90dB (A) CALCULATED PER ISO 3746

1. LEVELING FEET ARE PROVIDED FOR PROPER INSTALLATION.
2. UNIT WIDTH IS 33". DOOR OPENINGS IN FACILITY MUST BE 36" WIDE OR LARGER TO ACCOMODATE STERILIZER.
3. ALL DIMENSIONS IN INCHES AND [MM].
4. FLOOR SPACE IN LOADING/UNLOADING AREAS OF EQUIPMENT TO BE LEVEL WITHIN 1/16". FOR INSTANCES OF MULTIPLE INSTALLATIONS THIS TOLERANCE SHOULD BE HELD FOR THE ENTIRE SPAN OF INSTALLED EQUIPMENT.
5. SERVICE CLEARANCE MUST BE MAINTAINED TO ALLOW ACCESS TO STERILIZER FOR SERVICEABILITY.
6. 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.

INSTALLATION SPECIFICATIONS:

1. THE INSTALLATION OF THE AMSCO V-PRO MAX 2 LOW TEMPERATURE STERILIZATION SYSTEMS MUST MEET ALL FEDERAL, STATE AND LOCAL REGULATIONS (NEC IN U.S., IEC IN EU, AND CEC IN CANADA).
2. 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.
3. PER ANSI/AAMI ST58:2013 OR SUBSEQUENT, THE STERILIZER SHALL BE INSTALLED AND OPERATED IN AN AREA WITH A VENTILATION SYSTEM CAPABLE OF AT LEAST 10 AIR EXCHANGES PER HOUR.
4. STERILIZER MUST BE INSTALLED AND OPERATED IN AN AREA WHERE THE TEMPERATURE IS BETWEEN 59° F AND 86° F (15° C AND 30° C), AND THE RELATIVE HUMIDITY RANGE IS BETWEEN 20% AND 65%.
5. UNIT SHOULD NOT BE INSTALLED IN AN AREA WHICH IS NOT COMPATIBLE WITH OXIDIZERS. CONSULT THE MSDS FOR ANY CHEMICALS THAT MAY BE PRESENT IN ADDITION TO THE MSDS FOR THE HYDROGEN PEROXIDE STERILANT.

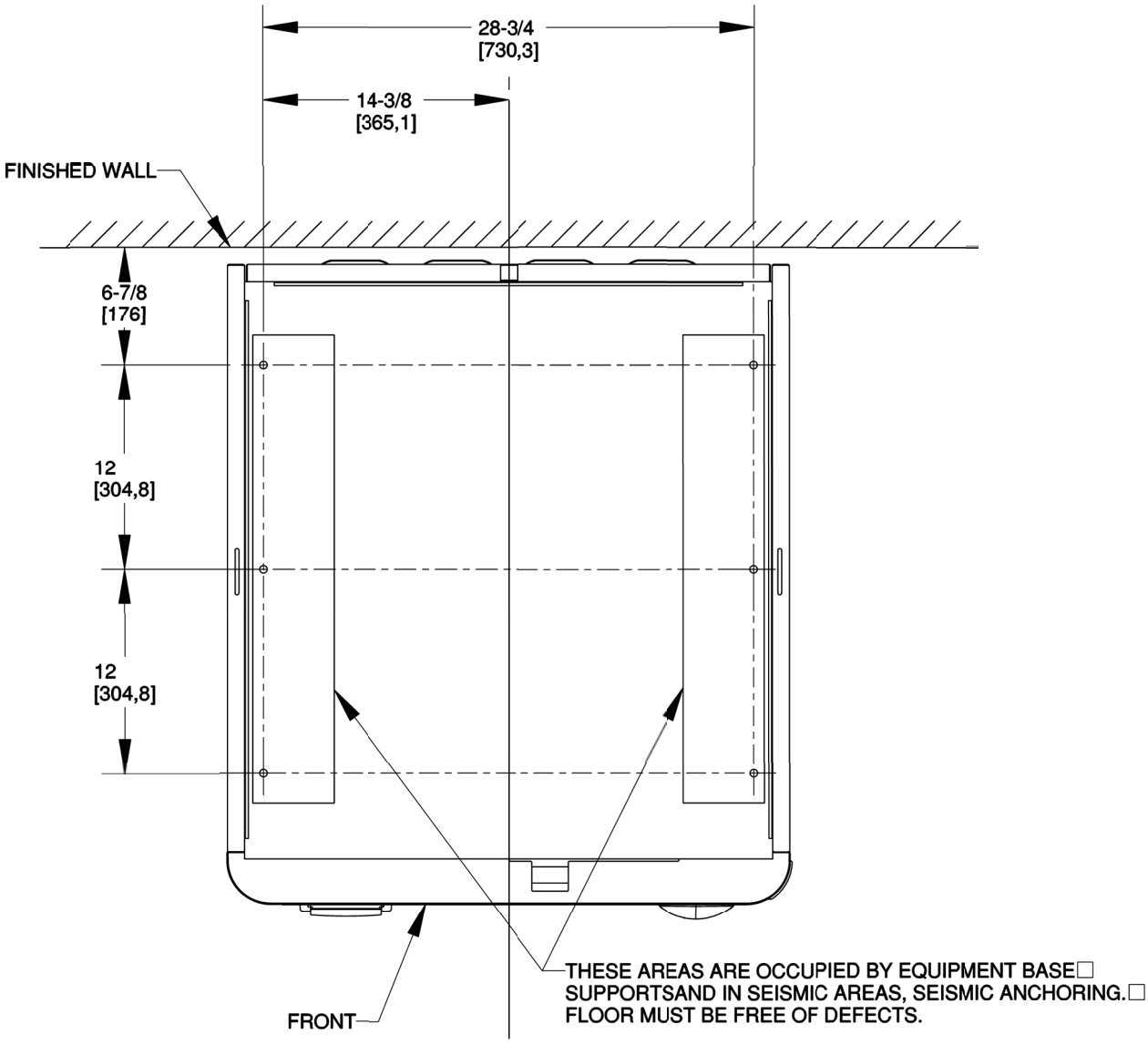
STERIS Corporation

TITLE

SINGLE DOOR CABINET EQUIPMENT DRAWING
AMSCO V-PRO MAX 2

SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	Lambert, Sean	10251899 D.5	10091243	D

SEISMIC MOUNTS



STERIS Corporation

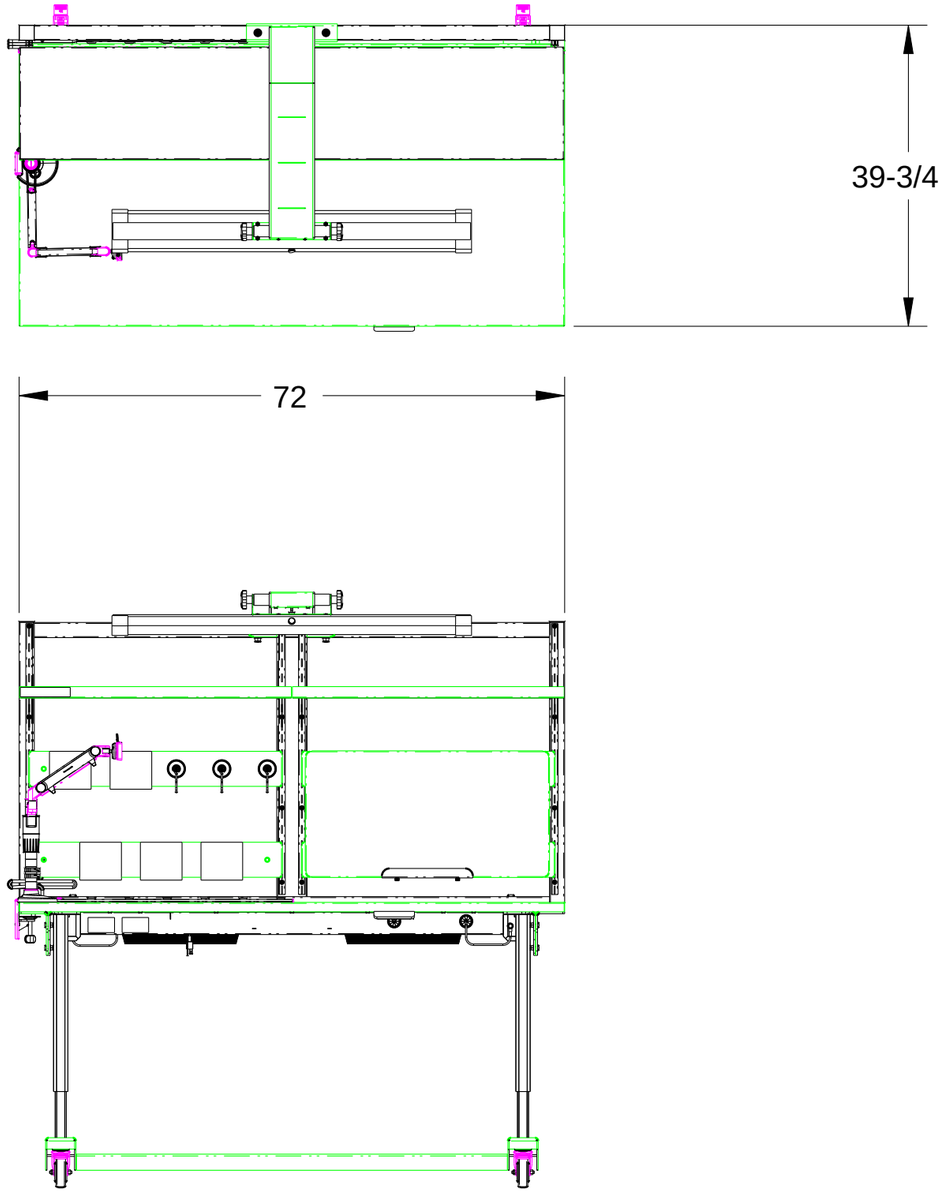
TITLE

SINGLE DOOR CABINET EQUIPMENT DRAWING
AMSCO V-PRO MAX 2

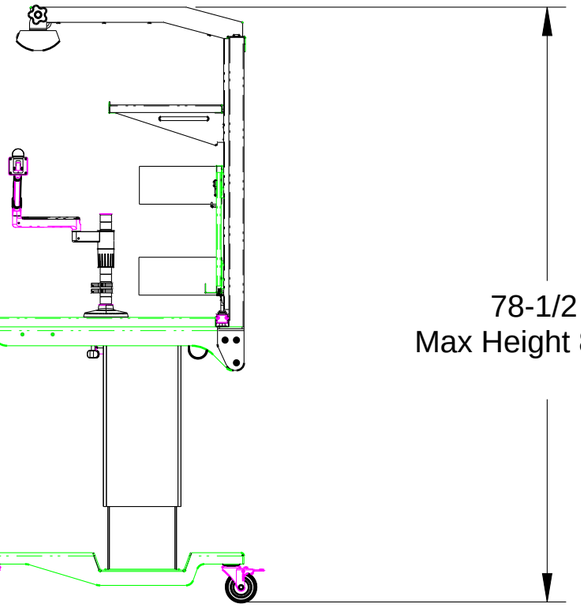
SIZE:	SCALE:	DRAWN BY:	DRAWING NUMBER:	PART NUMBER:	REVISION:
A	NTS	Lambert, Sean	10251899 D.5	10091243	D

Ref:

DRW. NO.	10096246 Rev A	1	SHEET OF	1



General Notes:
1. Electrical Requirement 120V 15A
   (2 outlets recommended, within 4 ft of unit)
2. Space requirement 73" L x 40" W x 86" H
3. Requirements apply to models Prep 54, 55, 56, 57



125

Pro/ENGINEER DWG. - B SIZE

STERIS®

STERIS Corporation
Mentor, OH

TITLE: 36 x 72 Prep and Pack Workstation Equipment Drawing

FIRST MADE FOR: Prep & Pack 36 x 72 Workstations

DWN	J Everett	CKD		ENG		MFG.		C.D.	
DATE	4/26/17	DATE		DATE		DATE		DATE	

DWG. NO. 10096246 Rev A

1 SHEET OF 1

DEPARTMENT OF VETERANS AFFAIRS
VHA MASTER SPECIFICATIONS

TABLE OF CONTENTS VOLUME 1
Section 00 01 10

ANDERSON

INSTRUCTIONS TO CONTRACTOR

Addendum #2

April 08, 2025

Construct New SPS

Sioux Falls VAMC

Sioux Falls, SD

Project # 438-460

The Contents of this Revision alter and amend the original drawings and specifications:

Drawings:

1. Drawing AE101
    a. Revised and added notes
2. Drawing AE212
    a. Revised elevations 8, 13, 14, and 15.
3. Drawing AE602
    a. Revised door hardware numbers
    b. Revised exterior window types and notes.
4. Drawing AF101
    a. Added key note and room tag
5. Drawing AW101
    a. Added sign tag at door.
6. Drawing AW601
    a. Revised SIGNAGE TYPES (1/AW601) and SIGN MESSAGE SCHEDULE

Specifications:

1. Specification 00 01 10:
    a. Revision: Added Specification 08 56 53 Blast Resistant Windows
    b. Revision: Removed Specification section 08 44 13 Glazed Aluminum Curtain Walls.
    c. Revision: Added Specification section 09 65 36.13 Static Dissipative Resilient Tile Flooring
2. Section 014529 - Testing Laboratory Services
    a. REVISED section attached.
3. Specification 08 11 13 Hollow Metal Doors and frames
    a. Revision: Revised information in Part 2 – Products.
4. Specification 08 41 13 Aluminum Storefront:
    a. Revision: Revised specification
5. Specification 08 56 53 Blast Resistant Windows.
    a. Revision: Added specification.
6. Specification 08 44 13 Glazed Aluminum Curtainwall:
    a. Revision: Delete specification.
7. Specification 08 71 00:
    a. Revision: Revised hardware group numbers.
8. Specification 08 80 00: Glazing
    a. Revision: Revised section 1.4.C
9. Specification 09 06 00:
    a. Revision: Added finishes for Section 09 65 36.13.
10. Specification 09 65 36.13 Static Dissipative Resilient Tile Flooring
    a. Added specification.

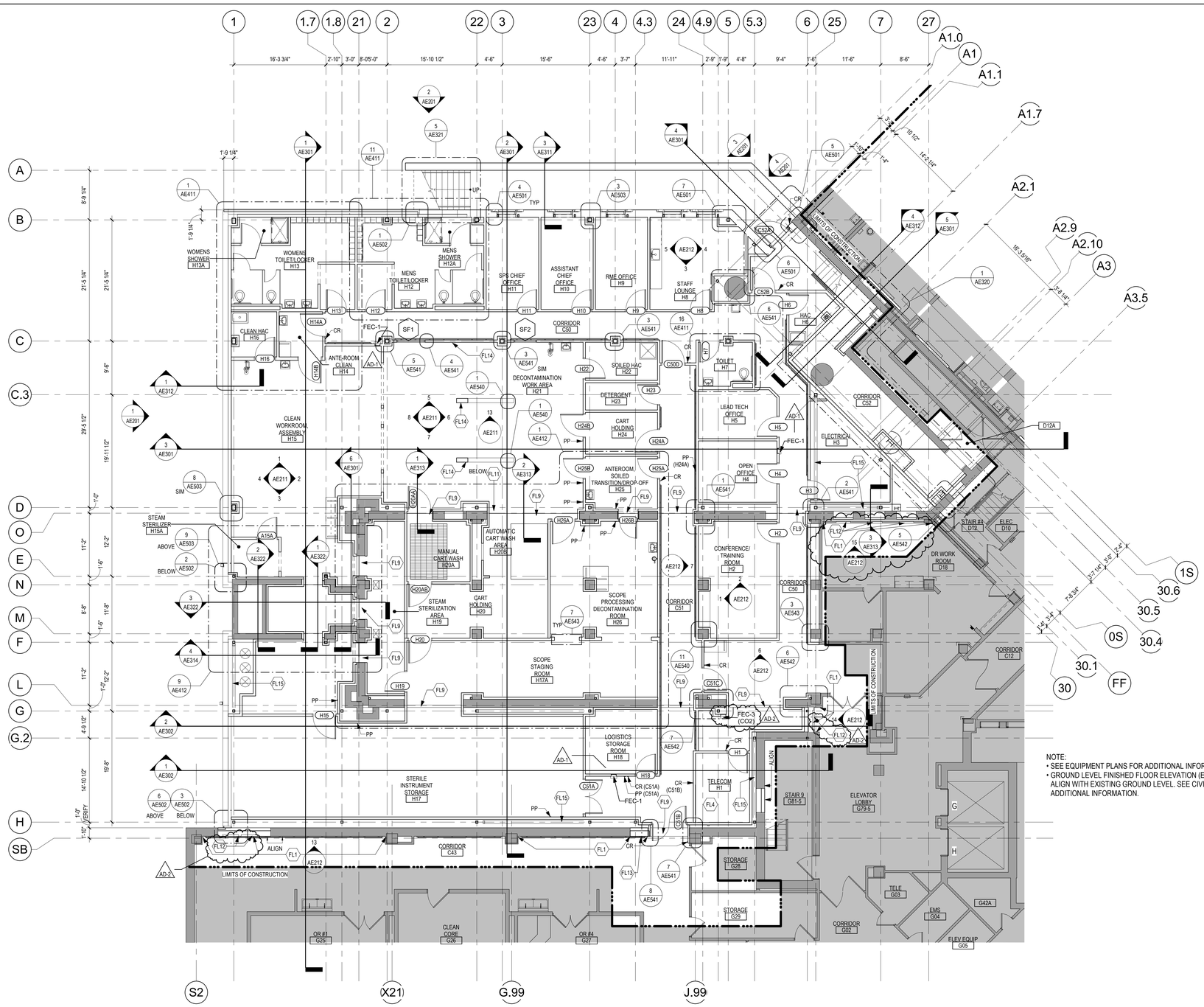
11. Specification 10 44 13:
    a. Revision: Added / revised cabinet type, cabinet type designations, and sizes.

ATTACHMENTS:

DRAWINGS: AE101, AE212, AE602, AF101, AW601

SPECIFICATIONS: 00 01 00, 08 11 13, 08 41 13, 08 56 53, 08 71 00, 08 80 00, 09 06 00, 09 65 36.13, 10 44 13.

ISSUED BY ANDERSON and IMEG: TO, GB, EH



1 GROUND LEVEL FLOOR PLAN
1/8" = 1'-0"

0 4' 8' 16'

TRUE NORTH

PLAN NORTH

NOTE:
- SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION
- GROUND LEVEL FINISHED FLOOR ELEVATION (EL: 100'-0") TO ALIGN WITH EXISTING GROUND LEVEL. SEE CIVIL FOR ADDITIONAL INFORMATION.

FLOOR PLAN KEYED NOTES

- FL1 PATCH PARTITION, WITH MATERIALS TO MATCH EXISTING ADJACENT SURFACES, AS REQUIRED FROM DEMOLITION. WHERE EXISTING FINISHES ARE DISTURBED PAINT TO MATCH ADJACENT FINISH. PAINT ENTIRE WALL OF EXISTING INTERIOR SPACES WHERE PATCHING OCCURS.
- FL2 4" H x 4" W CONTINUOUS CONCRETE CURB AT DUCTWORK AND / OR OPENING IN SLAB. PROVIDE 1" RADIUS AT ROOM SIDE OF CURB.
- FL3 4" HIGH CONCRETE PAD FOR EQUIPMENT. COORDINATE SIZE AND LOCATION WITH MECHANICAL. PAD SHOULD EXTEND MIN 6" ALL SIDES FROM EDGE OF EQUIPMENT.
- FL4 PROVIDE FIRE RETARDANT PLYWOOD 3 SIDES OF ROOM. SEE TYPICAL ELEVATIONS SHEET AE212
- FL5 RATED EXPANSION JOINT SEE DETAIL
- FL6 4" H x 4" W CONTINUOUS CONCRETE CURB WITH 1" RADIUS AT ROOM SIDE AND SLOPED TOP. SEE WALL SECTIONS
- FL7 EXISTING HOLLOW METAL DOOR FRAME. PATCH HOLES IN FRAME, PATCH DOOR LATCH AND HINGE POCKETS WITH STEEL PLATE SAME THICKNESS AS FRAME. WELD FULLY AND GRIND WELDS SMOOTH. REMOVE EXISTING RUST AS REQUIRED PATCH IN SAME MANOR AS LATCH AND HINGES. PREP FRAME FOR PAINT. PANT DOOR FRAME COLOR AS SCHEDULED
- FL8 STOOP AND / OR STAIRS -SEE STRUCTURAL AND CIVIL
- FL9 PATCH CONCRETE FLOOR AT REMOVED EXTERIOR WALL. SEE SECTIONS FOR ADDITIONAL INFORMATION
- FL10 PROVIDE CONCRETE RAMP AT DOOR.
- FL11 INFILL WALL AT REMOVED LOUVER AT PIPE BASEMENT LEVEL. MATCH EXISTING MATERIALS. SEE STRUCTURAL FOR ADDITIONAL INFORMATION
- FL12 LUMINOUS VIRTUAL WINDOW. SEE DETAIL 8 / AE212
- FL13 MODIFY HANDRAIL AS REQUIRED FOR OPENING AS SCHEDULED.
- FL14 1'-0" x 1'-0" SST ACCESS PANEL. COORDINATE LOCATION WITH MECH
- FL15 STEEL DIAGONAL FRAMING. SEE STRUCTURAL

NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

GENERAL NOTES

1. THE ARCHITECTURAL DRAWINGS SHOW PRINCIPAL AREAS AND LIMITS OF CONSTRUCTION WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY BE NECESSARY IN AREAS NOT SHOWN ON ARCHITECTURAL DRAWINGS DUE TO CHANGES AFFECTING ELECTRICAL, MECHANICAL, PLUMBING AND OTHER SYSTEMS. THIS INCIDENTAL WORK SHALL BE PART OF THIS CONTRACT. INSPECT THESE AREAS TO ASCERTAIN WORK REQUIRED AND PREFORM THE WORK IN ACCORDANCE OF CONTRACT REQUIREMENTS.
2. PROVIDE FIREPROOFING TO THE RATING REQUIRED AS INDICATED IN THE LIFE SAFETY PLAN, CODE SUMMARY AND PER NFPA ON STRUCTURAL STEEL ELEMENTS.
3. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
4. PATCH OPENINGS CUT THOUGH RATED CONSTRUCTION WITH MATERIALS COMPATIBLE WITH EXISTING ASSEMBLY TO RESTORE INTEGRITY OF THE RATING. RESTORE FINISHES OF DISTURBED AREAS TO LIKE NEW CONDITION.
5. GENERAL CONTRACTOR TO CHECK MECHANICAL DRAWINGS FOR EXISTING PIPES AND DUCTS FURRED IN WALLS. VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO PROCEEDING WITH REMODELING.
6. RESTORE EXISTING FIREPROOFING TO RATINGS INDICATED ON LIFE SAFETY PLANS WITH MATERIALS TO MATCH EXISTING.
7. AT LOCATIONS WHERE EXISTING FIRESTOPPING IS REQUIRED TO BE ALTERED, REMOVE EXISTING FIRESTOPPING SYSTEM IN ITS ENTIERTY AND REPLACE FIRE STOPPING SYSTEM WITH NEW FIRESTOPPING MATERIALS THAT MEET THE RATING REQUIREMENTS OF THE PENETRATION.
8. DIMENSIONS OF EQUIPMENT ARE THOSE OF THE BASIS-OF-DESIGN EQUIPMENT. VERIFY DIMENSIONS OF ACTUAL EQUIPMENT BEING PROVIDED TO COORDINATE SPACE REQUIREMENTS.
9. VERFITY DIMENSIONS OF MECHANICAL OR ELECTRICAL EQUIPMENT PRIOR TO FABRICATING SUPPORTS FOR THE EQUIPMENT.
10. PATCH AREAS DISTURBED OR MODIFIED BY THIS WORK WITH MATERIALS TO MATCH EXISTING ADJACENT SRUFACES OR SCHEDULED FINISHES AND TO A LIKE NEW CONDITION.
11. PROVIDE ACCESS PANELS WHERE INDICATED ON DRAWINGS AND WHERE DESCRIBED IN SPECIFICATIONS SECTION 08 31 13. COORDINATE LOCATIONS AND SIZES REQUIRED (24" X 24" MINIMUM) WITH MECHANICAL, PLUMBING, ELECTRICAL AND TECHNOLOGY SUBCONTRACTORS.
12. ABREVIATIONS AND SYMBOLS OF ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL MAY VARY BY DISCIPLINE. SEE RESPECTIVE DISIPLINE SECTIONS AND/OR DRAWINGS FOR DEFINITIONS.
13. AT MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, PROVIDE 3/4" FIRE RETARDANT TREATED (FRT) PLYWOODON SURFACE OF SCHEDULED PARTITION FOR SURFACE MOUNTED FIXTURES AND EQUIPMENT, UNLESS NOTED OTHERWISE. DO NOT PAINT OVER FRT LABEL.
14. EVALUATE INTEGRITY OF EXISTING LIFE SAFETY RATED PARTITION ASSEMBLIES INDICATED BY SYMBOLS ON THE LIFE SAFETY PLAN(S) WITHIN THE PROJECT SCOPE INCLUDING PENETRATIONS THOUGH ASSEMBLY AND BASE AND HEAD OF ASSEMBLY. WHERE GAPS OR DEFICIES ARE FOUND, RESTORE INTEGRITY OF EXISTING ASSEMBLIES WITH MATERIAL NECESSARY TO MEET REQUIRED REATING OF THE ASSEMBLIES.

FLOOR PLAN SYMBOLS

	EXISTING WALL TO REMAIN	8'-0"	DIMENSION LINE, NOMINAL
	WALL	8'-0"	EXTENDED DIMENSION LINE, NOMINAL
	EXISTING DOOR AND FRAME TO REMAIN	1A AE211 2B	INTERIOR ELEVATION INDICATOR TAG
101A	DOOR	1A AE201	EXTERIOR ELEVATION INDICATOR TAG
101B	INTERIOR BORROWED LIGHT	203	EQUIPMENT TAG
B3	WALL TAG	100	FLOOR SPOT ELEVATION
OFFICE 101	ROOM NAME AND NUMBER	1A AE501	DETAIL REFERENCE TAG
FP10	KEY NOTE		
1A AE201	INTERIOR SECTION REFERENCE TAG	1A AE201	EXTERIOR SECTION REFERENCE TAG
PR01	REVISION TAG		REVISION CLOUD
A	GRIDLINE		

NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

ADDENDUM 2 (AD-2)	04/08/2025
ADDENDUM 1 (AD-1)	03/28/2025
Revisions:	Date:

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STAMP

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Name: Tom Olesak
Date: 02/14/2025
License Number: 18157

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

Drawing Title: GROUND LEVEL FLOOR PLAN

Approved:

Phase: BID DOCUMENTS

FULLY SPRINKLERED

Project Title: CONSTRUCT NEW SPS

Location: Sioux Falls, SD.

Issue Date: 02/14/2025 | Checked: LA | Drawn: GJB

Project Number: 438-460

Building Number: 5

Drawing Number: AE101

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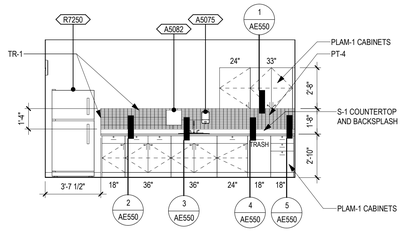
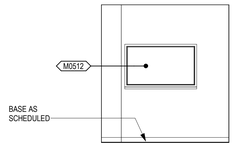
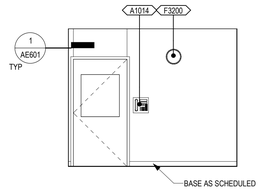


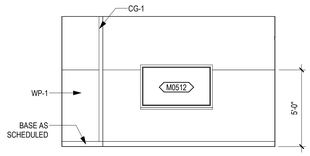
5 INTERIOR ELEVATION - STAFF LOUNGE H8 - SOUTH
1/4" = 1'-0"



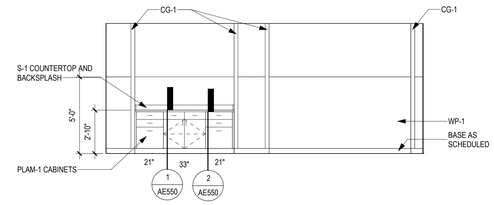
4 INTERIOR ELEVATION - STAFF LOUNGE H8 - NORTH
1/4" = 1'-0"



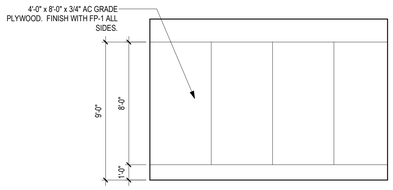
3 INTERIOR ELEVATION - STAFF LOUNGE H8 - EAST
1/4" = 1'-0"



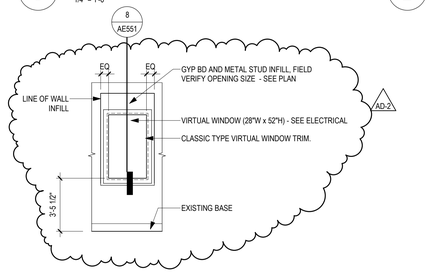
2 INTERIOR ELEVATION - CONFERENCE/TAINING ROOM H2 - WEST
1/4" = 1'-0"



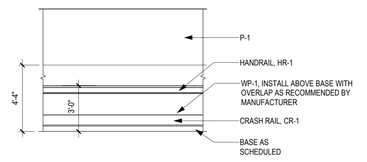
1 INTERIOR ELEVATION - CONFERENCE/TAINING ROOM H2 - SOUTH
1/4" = 1'-0"



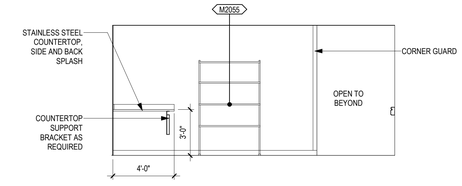
9 INTERIOR ELEVATION - TYPICAL TELECOM ROOM - BACK
1/4" = 1'-0"



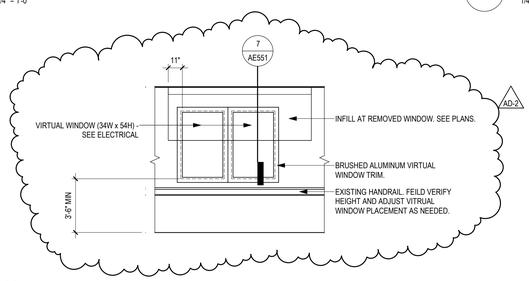
8 INTERIOR ELEVATION - VIRTUAL WINDOW INFILL AT EXISTING
1/4" = 1'-0"



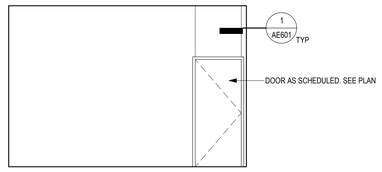
7 CORRIDOR WALL PROTECTION - TYP
1/4" = 1'-0"



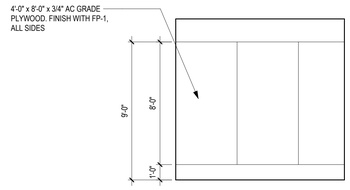
6 ELEVATION - CORRIDOR C50 - WEST
1/4" = 1'-0"



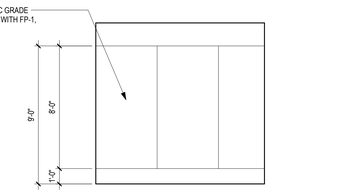
13 INTERIOR ELEVATION - VIRTUAL WINDOW - CORRIDOR C43 - WEST
1/4" = 1'-0"



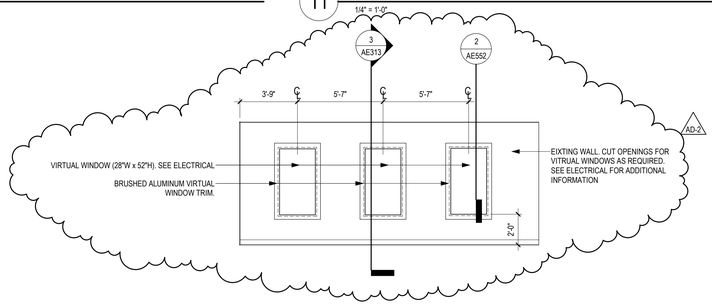
12 INTERIOR ELEVATION - TYPICAL TELECOM ROOM - DOOR
1/4" = 1'-0"



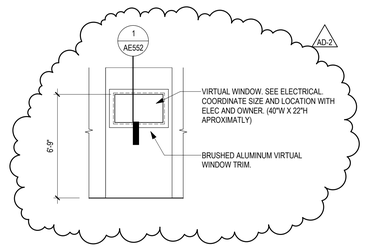
11 INTERIOR ELEVATION - TYPICAL TELECOM ROOM - SIDE 2
1/4" = 1'-0"



10 INTERIOR ELEVATION - TYPICAL TELECOM ROOM - SIDE 1
1/4" = 1'-0"



15 INTERIOR ELEVATION - VIRTUAL WINDOW - DR WORK ROOM D18 - WEST
1/4" = 1'-0"



14 INTERIOR ELEVATION - VITRUAL WINDOW - ELEVATOR LOBBY G79-5
1/4" = 1'-0"

ADDENDUM 2 (AD-2)	04/08/2025
Revisions:	Date:

CONSULTANT

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Anderson Engineering of Minnesota, LLC | Proj # 16584

STAMP

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Name: Tom Olesak
Date: 02/14/2025
License Number: 18157

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: INTERIOR ELEVATIONS
Approved:

Phase: BID DOCUMENTS
FULLY SPRINKLERED

Project Title: CONSTRUCT NEW SPS
Location: Sioux Falls, SD.
Issue Date: 02/14/2025
Checked: LA
Drawn: GJB

Project Number: 438-460
Building Number: 5
Drawing Number: AE212

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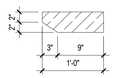
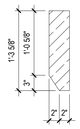
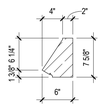




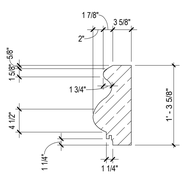
3 CAST STONE- ACCENT
1" = 1'-0"

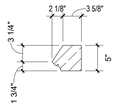
2 CAST STONE- HEADER
1" = 1'-0"



5 CAST STONE- SILL
1" = 1'-0"

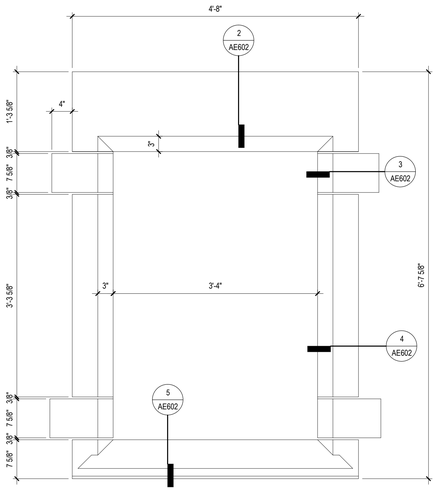
4 CAST STONE- JAMB
1" = 1'-0"





6 CAST STONE- DRIP EDGE BAND
1" = 1'-0"

7 CAST STONE- SMALL BAND
1" = 1'-0"



1 CAST STONE WINDOW TRIM DETAIL
1" = 1'-0"

OPENING SCHEDULE

ASSOCIATED ROOMS		OPENING			PANEL INFORMATION			FRAME INFORMATION						
FROM ROOM NAME	TO ROOM NAME	NUMBER	WIDTH	HEIGHT	PANEL TYPE	2ND PANEL TYPE	PANEL GLAZING	FRAME TYPE	FRAME GLAZING	HDW GROUP	FIRE LABEL (MIN)	GASKET	ELECTRICAL	S LABEL	COMMENTS
	INTERSTITIAL SPACE	134	8'-0"	7'-0"	HM-F	HM-F	NONE	HMM-1	NONE	HW-6					INSULATED, BLAST RESISTNAT
STEAM STERILIZER	CLEAN WORKROOM, ASSEMBLY	A15A	3'-6"	7'-0"	FRP-F		NONE	FRPS-1	NONE	HW-12					
CORRIDOR	CORRIDOR	C50D	4'-0"	7'-0"	WD-NV		MG-1	HMS-1	NONE	HW-5		Y	Y		CARD READER, CLOSER
CORRIDOR	STERILE INSTRUMENT STORAGE	C51A	6'-0"	7'-0"	WD-NV	WD-NV	MG-1	HMS-1	NONE	HW-1	20	Y	Y	Y	POWER OPERATED, CARD READER. INTERCONNECT TO DOOR C51B
CORRIDOR		C51B	6'-0"	7'-0"	WD-NV	WD-NV	FR-1	HMS_DE-1	NONE	HW-2	90	Y	Y	Y	POWER OPERATED, CARD READER. INTERCONNECT TO DOOR C51A
CORRIDOR	CORRIDOR	C51C	4'-0"	7'-0"	WD-GH		MG-1	HMS-1	NONE	HW-3		Y	Y		CARD READER, CLOSER
CORRIDOR		C52A	4'-0"	7'-0"	HM-F		NONE	HMM-1	NONE	HW-4		Y	Y		BLAST RESISTANT, INSULATED, CARD READER, CLOSER
CORRIDOR	CORRIDOR	C52B	4'-0"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-5	90	Y	Y	Y	
TELECOM	CORRIDOR	H1	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-3	45	Y	Y	Y	CARD READER, CLOSER
CORRIDOR	CONFERENCE/ TRAINING ROOM	H2	3'-6"	7'-0"	WD-NV		MG-1	HMS-1	NONE	HW-9					
CORRIDOR	ELECTRICAL	H3	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-16					CLOSER
CORRIDOR	OPEN OFFICE	H4	3'-6"	7'-0"	WD-NV		MG-1	HMS-1	NONE	HW-15					
CORRIDOR	LEAD TECH OFFICE	H5	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-15					
CORRIDOR	HAC	H6	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-16					
CORRIDOR	TOILET	H7	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-14					
CORRIDOR	STAFF LOUNGE	H8	3'-6"	7'-0"	WD-GH		MG-1	HMS-1	NONE	HW-18					
CORRIDOR	RME OFFICE	H9	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-15					
CORRIDOR	ASSISTANT CHIEF OFFICE	H10	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-15					
CORRIDOR	SPS CHIEF OFFICE	H11	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-15					
CORRIDOR	MENS TOILET/LOCKER	H12	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-18					
MENS TOILET/LOCKER	MENS SHOWER	H12A	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-10					
CORRIDOR	WOMENS TOILET/LOCKER	H13	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-18					
WOMENS TOILET/LOCKER	WOMENS SHOWER	H13A	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-10					
CORRIDOR	ANTE-ROOM CLEAN	H14A	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-3		Y	Y		CARD READER, CLOSER
ANTE-ROOM CLEAN	CLEAN WORKROOM, ASSEMBLY	H14B	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-8		Y			
CLEAN WORKROOM, ASSEMBLY	STERILE INSTRUMENT STORAGE	H15	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-7	20	Y	Y	Y	POWER OPERATED
CLEAN WORKROOM, ASSEMBLY	CLEAN HAC	H16	3'-6"	7'-0"	FRP-F		NONE	FRPS-1	NONE	HW-17					
CORRIDOR	LOGISTICS STORAGE ROOM	H18	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-3	20	Y		Y	
STEAM STERILIZATION AREA	SCOPE STAGING ROOM	H19	3'-6"	7'-0"	WD-F		NONE	HMS-1	NONE	HW-2.1	20	Y		Y	
CART HOLDING	SCOPE STAGING ROOM	H20	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-11	20	Y		Y	
MANUAL CART WASH	DECONTAMINATION WORK AREA	H20AA	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-8					
MANUAL CART WASH	CART HOLDING	H20AB	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-11					
DECONTAMINATION WORK AREA	SOILED HAC	H22	3'-6"	7'-0"	FRP-F		NONE	FRPS-1	NONE	HW-17					
CORRIDOR	DETERGENT	H23	3'-6"	7'-0"	FRP-F		NONE	FRPS-1	NONE	HW-17					
CORRIDOR	CART HOLDING	H24A	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-13				Y	POWER OPERATED
CART HOLDING	DECONTAMINATION WORK AREA	H24B	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-7				Y	POWER OPERATED
CORRIDOR	ANTEROOM, SOILED TRANSITION/DROP-OFF	H25A	3'-6"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-13					
ANTEROOM, SOILED TRANSITION/DROP-OFF	DECONTAMINATION WORK AREA	H25B	3'-6"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-7				Y	POWER OPERATED
DECONTAMINATION WORK AREA	SCOPE PROCESSING DECONTAMINATION ROOM	H26A	4'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-7				Y	POWER OPERATED
	SCOPE PROCESSING DECONTAMINATION ROOM	H26B	3'-0"	7'-0"	FRP-GH		MG-1	FRPS-1	NONE	HW-7				Y	POWER OPERATED

AD-1

AD-2

DOOR PANEL NAMING

NOTE: ACTUAL PANELS MAY VARY FROM DESCRIPTIONS BELOW, REFER TO PANEL TYPE ELEVATIONS

HM-GF

PANEL PREFIXES

AL- ALUMINUM
CG- COILING GRILLE
CS- COILING SLATS
FRP- FIBERGLASS REINFORCED
HM- HOLLOW METAL
OS- OVERHEAD SECTIONAL
RD3- REVOLVING DOOR 3 PANEL
RD4- REVOLVING DOOR 4 PANEL
VL- VERTICAL LIFT
WD- WOOD

PANEL SUFFIXES

AG ALL GLASS
BF BIFOLD
BFGBIFOLD GLASS
D DUTCH
DG DUTCH GLASS
DSDUTCH W/SHELF
F FLUSH
G2GLASS 2 LIGHT
G3GLASS 3 LIGHT
GFGLASS FULL
GH GLASS HALF
LF LOUVER FULL
LGHLOUVER GLASS HALF
LHLOUVER HALF
LNV LOUVER NARROW VISION
NVNARROW VISION
NV2 NARROW VISION 2 LIGHT
NV3 NARROW VISION 3 LIGHT
NVCNARROW VISION CENTERED
RP2 RAISED PANEL 2 PANEL
RP4 RAISED PANEL 4 PANEL
RP6 RAISED PANEL 6 PANEL
RP8 RAISED PANEL 8 PANEL
V VISION
W WINDOWS (1 ROW)
WT WINDOWS THROUGHOUT

DOOR FRAME NAMING

NOTE: ACTUAL FRAMES MAY VARY FROM DESCRIPTIONS BELOW, REFER TO FRAME TYPE ELEVATIONS

HMS-2

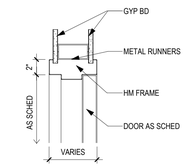
FRAME PREFIXES

AL- ALUMINUM
AL-BL- ALUMINUM BORROWED LIGHT
AL-SL- ALUMINUM SLIDING
ALR- ALUMINUM REVOLVING
CW## CURTAINWALL
FRP - FIBERGLASS REINFORCED
HMM- HOLLOW METAL MASONRY
HMM-BL- HMM BORROWED LIGHT
HMM-DE- HMM DOUBLE EGRESS
HMS- HOLLOW METAL STUD
HMS-BL- HMS BORROWED LIGHT
HMS-DE- HMS DOUBLE EGRESS
OC- OVERHEAD COILING
OS- OVERHEAD SECTIONAL
VL- VERTICAL LIFT
WD- WOOD
WD-BL- WOOD BORROWED LIGHT
WDP- WOOD POCKET

FRAME SUFFIXES

0 FRAMED-CASED OPENING
1 DOOR ONLY
2 SIDELIGHT(S) 1 SIDE
3 SIDELIGHT(S) 1 SIDE W/HORIZONTAL
4 SIDELIGHT(S) BOTH SIDES
5 SIDELIGHT(S) BOTH SIDES W/HORIZONTAL
6 DOOR W/TRANSOM
7 DOOR W/TRANSOM W/SIDELIGHT(S) 1 SIDE
8 TRANSOM W/SIDELIGHT(S) 1 SIDE W/HORIZONTAL
9 TRANSOM W/SIDELIGHT(S) BOTH SIDES
10 TRANSOM W/SIDELIGHT(S) BOTH SIDES W/HORIZONTAL
11 FULL WIDTH TRANSOM W/SIDELIGHT(S) 1 SIDE
1X1 1 LIGHT WIDE AND 1 LIGHT HIGH
2X2 2 LIGHTS WIDE AND 2 LIGHTS HIGH
3X3 3 LIGHTS WIDE AND 3 LIGHTS HIGH
(NOTE: OTHER COMBINATIONS POSSIBLE)
OX FIXED PANEL, ACTIVE PANEL
OXO FIXED PANEL, ACTIVE PANEL, FIXED PANEL
OXX FIXED, ACTIVE, ACTIVE
OXXO FIXED, ACTIVE, ACTIVE, FIXED
OXXXXO FIXED, ACTIVE, ACTIVE, ACTIVE, ACTIVE, FIXED

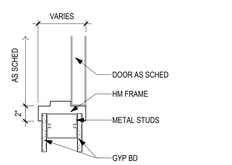
NOTE:
1. FOR PARTITION THICKNESS SEE PLANS AND PARTITION TYPES
2. SEE FRAME PROFILE INFORMATION.
3. FRP DOOR FRAME SIM



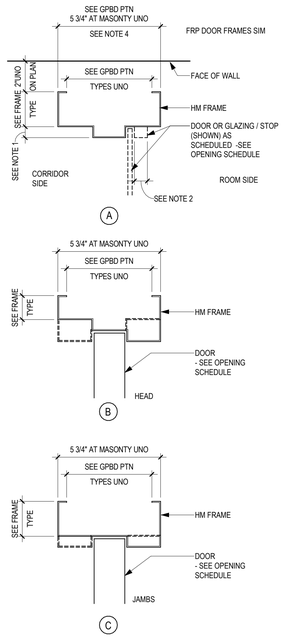
9 HM DOOR FRAME IN METAL STUD PARTITION - HEAD
1 1/2" = 1'-0"

NOTE:
1. FOR PARTITION THICKNESS SEE PLANS AND PARTITION TYPES
2. SEE FRAME PROFILE INFORMATION.
3. FRP DOOR FRAME SIM
4. SEE DETAIL 1 / AE601 FOR ADDITIONAL FRAMING INFORMAION

AD-1



8 HM DOOR FRAME IN METAL STUD PARTITION - JAMB
1 1/2" = 1'-0"

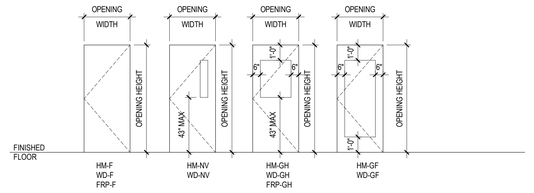


10 HM FRAME PROFIELS
3" = 1'-0"

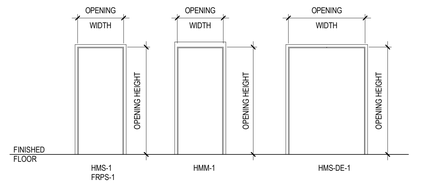
FRAME PROFILE NOTES:

1. 5/8" AT 20 MINUTE FIRE RATED FRAMES AND NON-RATED FRAMES, 3/4" AT FIRE RATED FRAMES OF 45 MINUTES AND ABOVE.
2. 5/8" AT 20 MINUTE FIRE RATED FRAMES AND NON-RATED FRAMES, 1" AT FIRE RATED FRAMES OF 45 MINUTES AND ABOVE.
3. FOR FRAMES IN GPBD PARTITIONS, VERIFY THAT THE FRAME THROAT DEPTH MATCHES THE PARTITION THICKNESS.
4. 5 3/4" AT MASONRY OR DEEP GPBD WALL RECESSES WHERE FRAME DOES NOT WRAP THE WALL.

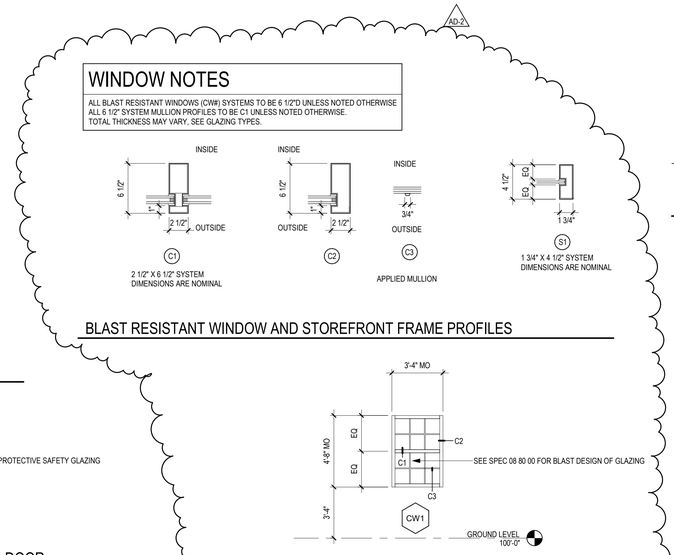
AD-1

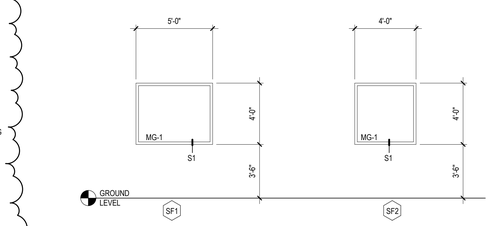


TYPES - DOOR PANELS

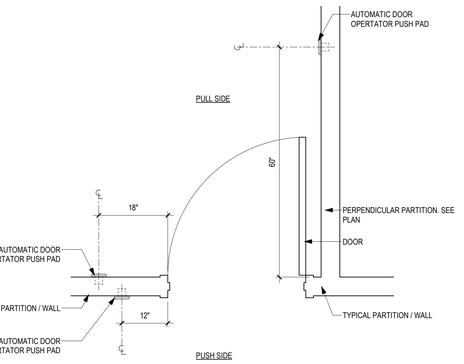


TYPES - HOLLOW METAL FRAMES

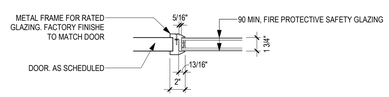




ALUMINUM STOREFRONT INTERIOR - TYPES (08 41 13)



AUTOMATIC DOOR OPERATOR (ADO) CLEARANCES
3/4" = 1'-0"



11 FIRE RESISTIVE GLASS FRAME AT RATED DOOR.
1 1/2" = 1'-0"

ADDENDUM 2 (AD-2)	**04/08/2025**
ADDENDUM 1 (AD-1)	**03/28/2025**
Revisions:	**Date:**

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STAMP

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.
Name: Tom Olesak
Date: 02/14/2025
License Number: 18157

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: DOOR SCHEDULE AND ELEVATIONS, CAST STONE PROFILES AND WINDOW TYPES
Approved:

Phase: BID DOCUMENTS
FULLY SPRINKLERED

Project Title: CONSTRUCT NEW SPS
Location: Sioux Falls, SD.
Issue Date: 02/14/2025
Checked: LA
Drawn: GJB

Project Number: 438-460
Building Number: 5
Drawing Number: AE602

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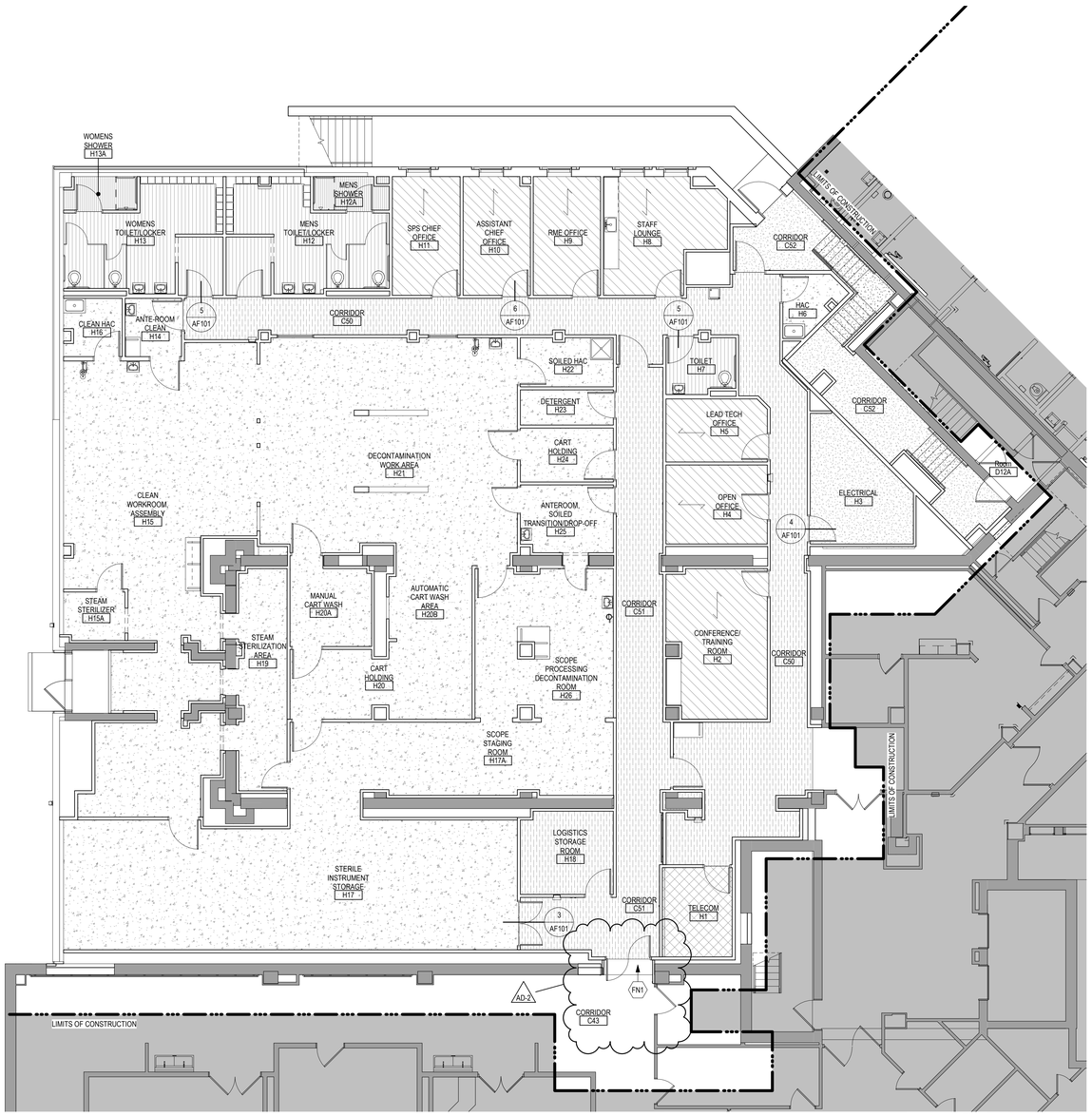


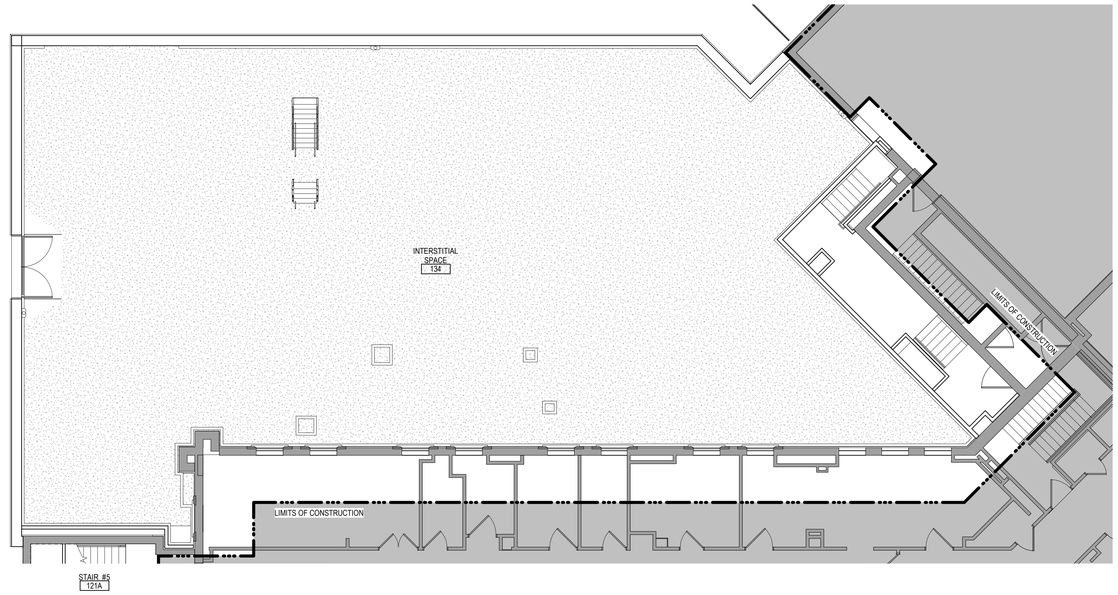
2 GROUND LEVEL FINISH PLAN

1/8" = 1'-0"

0 4" 8" 16"

TRUE NORTH

PLAN NORTH



1 FIRST LEVEL FINISH PLAN

1/8" = 1'-0"

FLOOR FINISH LEGEND

- RSF-1
- RES-1
- EPY-1
- PT-1
- PT-3
- RF-1
- SD-1

FINISH PLAN GENERAL NOTES

1. REFER TO PROJECT MANUAL SPECIFICATION SECTION 09 06 00 "SCHEDULE FOR FINISHES" FOR SPECIFIC PRODUCT SELECTION BASIS OF DESIGN AND OTHER REQUIREMENTS.
2. FIELD FINISH VENTS, GRILLES, ACCESS PANELS, PLUG STRIP, BASEBOARD RADIATION ENCLOSURES, ELECTRICAL PANEL BOARDS (IN FINISHED SPACES) TO MATCH SURFACE ON WHICH THEY OCCUR UNLESS OTHERWISE INDICATED. EXCEPTION: ITEMS WITH FACTORY WHITE FINISH, OCCURRING ON WHITE ACT OR WHITE GYPSUM BOARD CEILING SHALL NOT BE PAINTED. STAINLESS STEEL ITEMS SHALL NOT BE PAINTED.
3. FIELD VERIFY ALL NEW CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
4. LOCATE CHANGES IN FLOOR FINISH MATERIAL UNDER CENTERLINE OF CLOSED DOOR UNLESS OTHERWISE INDICATED.
5. PROVIDE CLEAR SILICONE SEALANT AT PERIMETER OF PLUMBING FLOOR DRAINS, CLEAN OUTS, ETC IN RESILIENT AND CERAMIC TILE FLOORS.
6. PROVIDE SEALANT TO HORIZONTAL AND VERTICAL INTERIOR CERAMIC TILE CORNERS, COLOR TO MATCH GROUT COLOR.
7. PROVIDE SEALANT AT JOINT BETWEEN COUNTER TOP, BACK OR SIDE SPLASH AND WALLS.
8. PROVIDE CLEAR SILICONE SEALANT AT THE BASE OF DOOR FRAME TO RESILIENT AND CT FLOORING, TYP. SEE PLANS AND ROOM FINISH SCHEDULE FOR FLOOR FINISH LOCATIONS.
9. HOLLOW METAL DOORS AND FRAMES TO BE PAINTED PT-4, UNLESS NOTED OTHERWISE IN THE OPENING SCHEDULE.
10. WOOD: PRE-FINISHED TO MATCH BUILDING STANDARD, REFER TO SPECIFICATION.
11. CEILING HEIGHTS AND MATERIALS/FINISHES CALLED OUT IN ROOM FINISH SCHEDULE ARE FOR ENTIRE CEILING OR MAJORITY OF THAT ROOM, UNLESS OTHERWISE INDICATED. SEE REFLECTED CEILING PLAN FOR CHANGES IN CEILING MATERIAL AND CEILING HEIGHT. PAINT ALL SURFACES OF SOFFIT SAME COLOR AS INDICATED.
12. COLOR SELECTIONS ARE BASED ON USE OF PRODUCTS INDICATED IN THE PROJECT MANUAL SPECIFICATION. IF MANUFACTURERS OTHER THAN THOSE INDICATED ARE USED, ARCHITECT MAY REVISE COLOR SELECTIONS OF OTHER FINISHES TO ENSURE PROPER COORDINATION.
13. PAINT ALL FIRE EXTINGUISHER CABINETS TO MATCH COLOR OF THE ADJACENT WALLS.
14. CEILING HEIGHTS ARE MEASURED FROM FINISH FLOOR.
15. FOR FLOOR FINISH MATERIALS AND PATTERN, SEE FINISH PLAN.
16. SEE INTERIOR ELEVATIONS FOR MORE FINISH INFO.

ROOM FINISH LEGEND & ABBREVIATIONS

CG L	CORNER GUARD	AF10	KEYNOTE
			MATERIAL INSTALL DIRECTION

AT ACOUSTICAL CEILING (TILE)
CT CERAMIC TILE
GWB (SC) GYPSUM WALLBACK SYSTEMS (SPECIAL COATING)
LVT LUXURY VINYL TILE
P PAINT
PT PORCELAIN TILE (FLOOR AND BASE)
RB RESILIENT BASE
RES RESINOUS EPOXY FLOORING
RES-W RESINOUS/EPOXY WALL/CEILING
RF RUBBER FLOORING
S SOLID SURFACE
SC SPECIAL COATING
SP SPECIAL FACED
WSF WELDED SEAM SHEET FLOORING (HEAT WELDED WITH ROD)

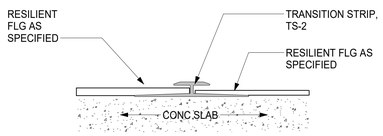
NOTE: NOT ALL SYMBOLS MAY BE USED ON EACH PLAN

FINISH PLAN KEYED NOTES

FN1 PATCH TO MATCH EXISTING FLOORING IN C43 AS REQUIRED. TS-2 TRANSITION STRIP TO TRANSITION TO NEW RUBBER FLOORING.

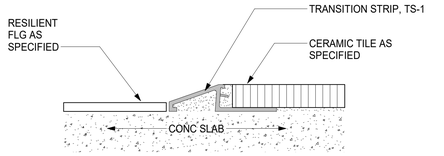
NOTE: NOT ALL KEYED NOTES MAY BE USED ON EACH PLAN

AD-2



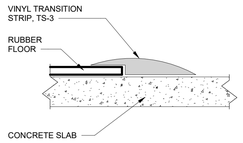
6 RESILIENT FLOORING TO RESILIENT FLOORING

12" = 1'-0"



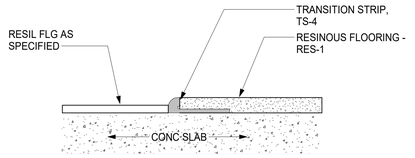
5 PORCELAIN TILE TO VINYL

12" = 1'-0"



4 RUBBER FLOORING TO CONC

12" = 1'-0"



3 RESILIENT TO RESINOUS

12" = 1'-0"

ADDENDUM 2 (AD-2)	**04/08/2025**
Revisions:	**Date:**

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Name: Tom Olesak

Date: 02/14/2025

License Number: 18157

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: FINISH PLANS

Approved:

Phase: BID DOCUMENTS

FULLY SPRINKLERED

Project Title: CONSTRUCT NEW SPS

Location: Sioux Falls, SD.

Issue Date: 02/14/2025 **Checked:** MJP **Drawn:** MRP

Project Number: 438-460

Building Number: 5

Drawing Number: AF101

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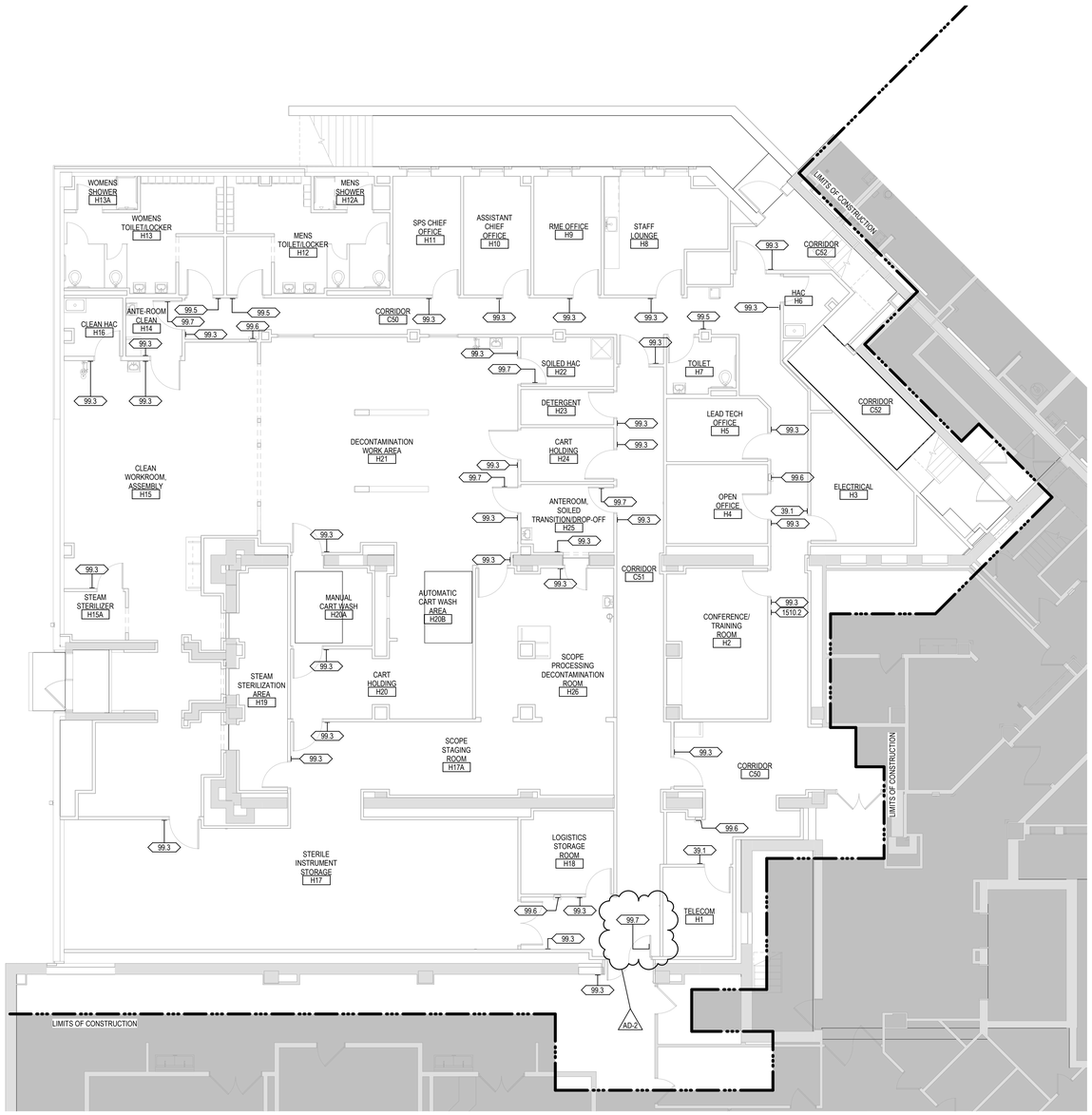

1 GROUND LEVEL WAYFINDING PLAN

1/8" = 1'-0"

SIGNAGE GENERAL NOTES

1. ALL SIGNAGE IDENTIFYING PERMANENT ROOMS SHALL COMPLY WITH 2010 STANDARD FOR ACCESSIBLE DESIGN.
2. ALL PERMANENT ROOM SIGNAGE TO HAVE TOP SECTION RAISED TEXT AND LOWER SECTION BRAILLE. BRAILLE TO BE GRADE 2.
3. ALL SIGNS TO BE MOUNTED ON LATCH SIDE OF DOOR UNLESS NOTED OTHERWISE. IF NO SPACE EXISTS ON LATCH SIDE MOUNT SIGN TO THE NEAREST ADJACENT WALL.
4. SIGNS MUST BE 2" FROM DOOR JAMB WITH 18" CLEAR FLOOR SPACE FROM CENTER OF SIGN.
5. ALL SIGN TEXT AND NUMBERING SUBJECT TO FINAL APPROVAL BY OWNER.
6. ALL SIGNS MOUNTED TO GLASS TO HAVE GLASS BACKER.
7. SIGNS TO BE MOUNTED ACCORDING TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND MATERIALS.
8. SIGN DRAWINGS AND DETAILS ARE FOR REFERENCE ONLY. SIGNAGE TO BE OWNER PROVIDED UNDER SEPARATE CONTRACT.

ADDENDUM 2 (AD-2)	**04/08/2025**
Revisions:	**Date:**

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Name: Tom Olesak

Date: 02/14/2025

License Number: 18157

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: GROUND LEVEL WAYFINDING PLAN

Approved:

Phase: BID DOCUMENTS

FULLY SPRINKLERED

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Location: Sioux Falls, SD.

Issue Date: 02/14/2025

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Drawn: MRP

Project Number: 438-460

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Drawing Number: AW101

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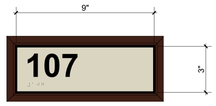
AD-2

TYPE 39.1



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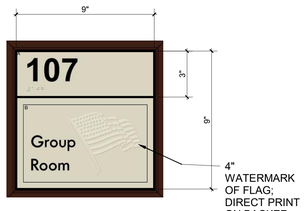

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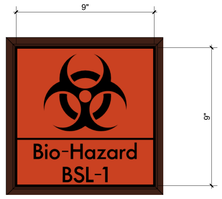
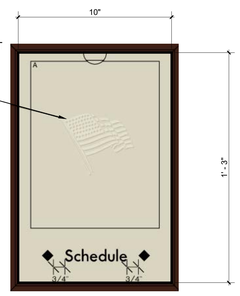
TYPE 99.7



4"
WATERMARK
OF FLAG;
DIRECT PRINT
ON BACKER

1510.2



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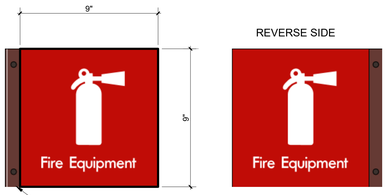

WALL MOUNT: ALUMINUM ANGLE MOUNT PAINTED BEIGE WITH POST BINDING SCREWS.

1 SIGNAGE TYPES
3" = 1'-0"

AD-2

SIGN MESSAGE SCHEDULE

LOCATION	SIGN MESSAGE	SIGN TYPE	REMARKS
C50	STERILE PROCESSING SERVICES	99.3	
C50	FIRE EQUIPMENT	99.6	
C50	FIRE EQUIPMENT	99.6	
C50	FIRE EQUIPMENT	99.6	
C51	STERILE PROCESSING SERVICES	99.3	
C51	CORRIDOR	99.3	
C51	STERILE PROCESSING SERVICES	99.3	
C51	BIOHAZARD	99.7	
C51	FIRE EQUIPMENT	99.6	
H1	N/A	39.1	
H2	CONFERENCE/ TRAINING ROOM	99.3	
H2	SCHEDULE	1510.2	
H3	N/A	39.1	
H4	OPEN OFFICE	99.3	
H5	LEAD TECH OFFICE	99.3	
H6	HAC	99.3	
H7	TOILET	99.5	
H8	STAFF LOUNGE	99.3	
H8	STAFF LOUNGE	99.3	
H9	RME OFFICE	99.3	
H10	ASSISTANT CHIEF OFFICE	99.3	
H11	SPS CHIEF OFFICE	99.3	
H12	MEN'S TOILET/LOCKER	99.5	
H13	WOMEN'S TOILET/LOCKER	99.5	
H14	ANTE-ROOM, CLEAN	99.3	
H14	ANTE-ROOM, CLEAN	99.3	
H14	BIOHAZARD	99.7	
H15	CLEAN WORKROOM, ASSEMBLY	99.3	
H15	CLEAN WORKROOM, ASSEMBLY	99.3	
H15A	STEAM STERILIZER	99.3	
H16	CLEAN HAC	99.3	
H17	STERILE INSTRUMENT STORAGE	99.3	
H18	LOGISTICS STORAGE ROOM	99.3	
H19	STEAM STERILIZATION AREA	99.3	
H20	CART HOLDING	99.3	
H20A	MANUAL CART WASH	99.3	
H20A	MANUAL CART WASH	99.3	
H22	SOLIED HAC	99.3	
H22	BIOHAZARD	99.7	
H23	DETERGENT	99.3	
H24	CART HOLDING	99.3	
H24	CART HOLDING	99.3	
H25	ANTEROOM, SOILED TRANSITION/DROP-OFF	99.3	
H25	ANTEROOM, SOLIED TRANSITION/DROP OFF	99.3	
H25	ANTEROOM, SOILED TRANSITION/DROP-OFF	99.3	
H25	BIOHAZARD	99.7	
H25	BIOHAZARD	99.7	
H26	SCOPE PROCESSING DECONTAMINATION ROOM	99.3	
H26	SCOPE PROCESSING DECONTAMINATION ROOM	99.3	

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SIGNAGE GENERAL NOTES

1. ALL SIGNAGE IDENTIFYING PERMANENT ROOMS SHALL COMPLY WITH 2010 STANDARD FOR ACCESSIBLE DESIGN.
2. ALL PERMANENT ROOM SIGNAGE TO HAVE TOP SECTION RAISED TEXT AND LOWER SECTION BRAILLE. BRAILLE TO BE GRADE 2.
3. ALL SIGNS TO BE MOUNTED ON LATCH SIDE OF DOOR UNLESS NOTED OTHERWISE. IF NO SPACE EXISTS ON LATCH SIDE MOUNT SIGN TO THE NEAREST ADJACENT WALL.
4. SIGNS MUST BE 2" FROM DOOR JAMB WITH 18" CLEAR FLOOR SPACE FROM CENTER OF SIGN.
5. ALL SIGN TEXT AND NUMBERING SUBJECT TO FINAL APPROVAL BY OWNER.
6. ALL SIGNS MOUNTED TO GLASS TO HAVE GLASS BACKER.
7. SIGNS TO BE MOUNTED ACCORDING TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND MATERIALS.
8. SIGN DRAWINGS AND DETAILS ARE FOR REFERENCE ONLY. SIGNAGE TO BE OWNER PROVIDED UNDER SEPARATE CONTRACT.

ADDENDUM 2 (AD-2)	04/08/2025
Revisions:	Date:

CONSULTANT

IMEG
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Anderson Engineering of Minnesota, LLC | Proj # 16584

STAMP

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Name: Tom Olesak
Date: 02/14/2025
License Number: 18157

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: WAYFINDING MESSAGE SCHEDULES & SIGNAGE DETAILS

Approved:

Phase: BID DOCUMENTS

FULLY SPRINKLERED

Project Title: CONSTRUCT NEW SPS

Location: Sioux Falls, SD.

Issue Date: 02/14/2025

Checked: MJP

Drawn: MRP

Project Number: 438-460

Building Number: 5

Drawing Number: AW601

4/8/2025 2:53:51 PM

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VA FORM 08 - 6231

SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hollow metal doors hung in hollow metal frames at interior and exterior locations.
2. Hollow metal door frames for wood doors at interior locations.

1.2 RELATED WORK

A. Section 08 71 00, DOOR HARDWARE: Door Hardware:

B. Section 08 80 00, GLAZING: Glazing.

C. Card Readers and Biometric Devices: Section 28 13 00, PHYSICAL ACCESS CONTROL SYSTEM.

D. Intrusion Alarm: Section 28 13 00, PHYSICAL ACCESS CONTROL SYSTEM.

1.3 APPLICABLE PUBLICATIONS

A. Comply with references to extent specified in this section.

B. American National Standard Institute (ANSI):

A250.8-2014 .....Standard Steel Doors and Frames

C. ASTM International (ASTM):

A240/A240M-15b .....Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

A653/A653M-15 .....Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip

A1008/A1008M-15 .....Steel, Sheet, Cold-Rolled, Carbon, Structural, High Strength Low Alloy and High Strength Low Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

B209-14 .....Aluminum and Aluminum-Alloy Sheet and Plate

B209M-14 .....Aluminum and Aluminum-Alloy Sheet and Plate (Metric)

B221-14 .....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

B221M-13 .....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric)

D3656/D3656M-13 .....Insect Screening and Louver Cloth Woven from Vinyl Coated Glass Yarns
E90-09 .....Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

D. Federal Specifications (Fed. Spec.):
L-S-125B .....Screening, Insect, Nonmetallic

E. Master Painters Institute (MPI):
No. 18 .....Primer, Zinc Rich, Organic

F. National Association of Architectural Metal Manufacturers (NAAMM):
AMP 500-06 .....Metal Finishes Manual

G. National Fire Protection Association (NFPA):
80-16 .....Fire Doors and Other Opening Protectives

H. UL LLC (UL):
10C-09 .....Positive Pressure Fire Tests of Door Assemblies
1784-15 .....Air Leakage Tests of Door Assemblies and Other Opening Protectives

I. Department of Veterans Affairs
VA Physical Security and Resiliency Design Manual October 1, 2020

1.4 SUBMITTALS

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Submittal Drawings:
1. Show size, configuration, and fabrication and installation details.

C. Manufacturer's Literature and Data:
1. Description of each product.
2. Include schedule showing each door and frame requirements fire label and smoke control label for openings.
3. Installation instructions.

D. Sustainable Construction Submittals:
1. Recycled Content: Identify post-consumer and pre-consumer recycled content percentage by weight.

E. Test reports: Certify each product complies with specifications.
1. Sound rated door.

F. Qualifications: Substantiate qualifications comply with specifications.
1. Manufacturer with project experience list .

G. Blast Design Calculations.
   1. Submit calculations for review and approval prepared by qualified blast consultant, with a minimum of 5 years of experience in design of blast resistant window systems, verifying door assembly including anchors comply with specified blast resistance performance.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:
   1. Regularly manufactures specified products.
   2. Manufactured specified products with satisfactory service on five similar installations for minimum five years.
      a. Project Experience List: Provide contact names and addresses for completed projects.

1.6 DELIVERY

A. Fasten temporary steel spreaders across the bottom of each door frame before shipment.
B. Deliver products in manufacturer's original sealed packaging.
C. Mark packaging, legibly. Indicate manufacturer's name or brand, type, production run number, and manufacture date.
D. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

1.7 STORAGE AND HANDLING

A. Store products indoors in dry, weathertight conditioned facility.
B. Protect products from damage during handling and construction operations.

1.8 WARRANTY

A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

PART 2 - PRODUCTS

2.1 SYSTEM PERFORMANCE

A. Design hollow metal doors and frames complying with specified performance:
   1. Fire Doors and Frames: UL 10C; NFPA 80 labeled.
      a. Fire Ratings: See drawings.
   2. Smoke Control Doors and Frames: UL 1784; NFPA 80 labeled, maximum 0.15424 cubic meter/second/square meter (3.0 cubic

feet/minute/square foot) at 24.9 Pa (0.10 inches water gauge) pressure differential.

3. Sound Rated Doors and Frames: Minimum 45 sound transmission class (STC) when tested according to ASTM E90.
4. Thermal Transmittance: 0.1 U-value (0.1 U-value), maximum at exterior doors .
5. Thermal Resistance: 10 R-value (10 R-value), minimum at exterior doors .
6. Blast Resistant Doors: Door, Frame and Anchorage to the supporting structure must be capable of resisting the following design blast load:
   a. Design Blast Load: Peak reflected pressure of 70 psi and reflected impulse of 112 psi-msec (3.2 msec equivalent triangular load duration), while sustaining some permanent deformation but remaining operable (ASTM F2247 Damage Category II). Note that the design blast load is larger than the blast load specified in the VA Physical Security Design Manual because the available standoff distance is 25 ft (as opposed to 50 ft.).
   b. Removable or fixed mullions for double doors, and their connections to the supporting structure, must be designed to resist the tributary design blast load while sustaining support rotations no greater than 2 degrees (midspan deflection of L/60).
   c. Glazing: Any glazing on exterior metal doors must meet the blast performance requirements stated in Section 08 80 00 of the specifications.
   d. Minimum gauge of metal used on blast resistant doors shall be 14 gauge.

2.2 MATERIALS

A. Sheet Steel: ASTM A1008/A1008M, cold-rolled.

B. Galvanized Sheet Steel: ASTM A653.

2.3 PRODUCTS - GENERAL

A. Basis of Design: Section 09 06 00, SCHEDULE FOR FINISHES.

B. Provide hollow metal doors and frames from one manufacturer.

C. Sustainable Construction Requirements:
   1. Steel Recycled Content: 30 percent total recycled content, minimum.

2.4 HOLLOW METAL DOORS

A. Hollow Metal Doors: ANSI A250.8; 44 mm (1-3/4 inches) thick. See drawings for sizes and designs.
   1. Interior Doors: Level 3 and Physical Performance Level A, extra-heavy duty; Model 2, seamless stairs and security locations.
   2. Exterior Doors: Level 4 and Physical Performance Level A, maximum heavy duty; Model 2, seamless.

B. Door Faces:
   1. Interior Doors: Sheet steel .
   2. Exterior Doors: Galvanized sheet steel minimum Z180 or ZF180 (G60 or A60) coating .

C. Door Cores:
   1. Interior Doors: vertical steel stiffeners.
   2. Exterior Doors: polyurethane .
   3. Fire Doors: Manufacturer's standard complying with specified fire rating performance.

2.5 HOLLOW METAL FRAMES

A. Hollow Metal Frames: ANSI A250.8; face welded. See drawings for sizes and designs.
   1. Interior Frames:
      a. Level 2 Hollow Metal Doors: 1.3 mm (0.053 inch) thick.
      b. Wood Doors 1.3 mm (0.053 inch) thick.

B. Frame Materials:
   1. Interior Frames: Sheet steel Z180 or ZF180 (G60 or A60) coating.
   2. Exterior Frames: Galvanized sheet steel minimum Z180 or ZF180 (G60 or A60) coating.

2.6 LOUVERS (NOT USED)

2.7 FABRICATION

A. Hardware Preparation: ANSI A250.8; for hardware specified in Section 08 71 00, DOOR HARDWARE.

B. Hollow Metal Door Fabrication:
   1. Close top edge of exterior doors flush and seal to prevent water intrusion.
   2. Fill spaces between vertical steel stiffeners with insulation.

C. Fire Doors:

1. Close top and vertical edges flush.
2. Apply steel astragal to active leaf at pair and double egress doors.
   a. Exception: Where vertical rod exit devices are specified for both leaves swinging in same direction.
3. Fire Door Clearances: NFPA 80.

D. Hollow Metal Frame Fabrication:
1. Terminated Stops: ANSI A250.8.
2. Panel Opening Frames:
   a. Provide integral stop on exterior, corridor, or secure side of door.
   b. Design rabbet width and depth to receive glazing material or panel shown on drawings
3. Frame Anchors:
   a. Floor anchors:
      1) Provide extension type floor anchors to compensate for depth of floor fills.
      2) Provide 1.3 mm (0.053 inch) thick steel clip angles welded to jamb and drilled to receive floor fasteners.
      3) Provide 50 mm by 50 mm by 9 mm (2 inch by 2 inch by 3/8 inch) clip angle for lead lined frames, drilled for floor fasteners.
      4) Provide mullion 2.3 mm (0.093 inch) thick steel channel anchors, drilled for two floor fasteners and frame anchor screws.
      5) Provide continuous 1 mm (0.042 inch) thick steel rough bucks drilled for floor fasteners and frame anchor screws for sill sections.
         a) Space floor bolts50 mm (24 inches) on center.
   b. Jamb anchors:
      1) Place anchors on jambs:
         a) Near top and bottom of each frame.
         b) At intermediate points at maximum 600 mm (24 inches) spacing.
      2) Form jamb anchors from steel minimum 1 mm (0.042 inch) thick.
      3) Anchors set in masonry: Provide adjustable anchors designed for friction fit against frame and extended into masonry minimum 250 mm (10 inches). Provide one of following types:

a) Wire Loop Type: 5 mm (3/16 inch) diameter wire.
b) T-Shape type.
c) Strap and stirrup type: Corrugated or perforated sheet steel.

4) Anchors for stud partitions: Provide tabs for securing anchor to sides of studs. Provide one of the following:
a) Welded type.
b) Lock-in snap-in type.

5) Anchors for frames set in prepared openings:
a) Steel pipe spacers 6 mm (1/4 inch) inside diameter, welded to plate reinforcing at jamb stops, or hat shaped formed strap spacers 50 mm (2 inches) wide, welded to jamb near stop.
b) Drill jamb stop and strap spacers for 6 mm (1/4 inch) flat head bolts to pass through frame and spacers.
c) Two piece frames: Subframe or rough buck drilled for 6 mm (1/4 inch) bolts.

6) Anchors for observation windows and other continuous frames set in stud partitions.
a) Weld clip anchors to sills and heads of continuous frames over 1200 mm (4 feet) long.
b) Space maximum 600 mm (24 inches) on centers.

7) Modify frame anchors to fit special frame and wall construction.

8) Provide special anchors where shown on drawings and where required to suit application.

E. Sound Rated Door Frames:
1. Seals: Integral continuous gaskets on frames.

2.8 FINISHES

A. Steel and Galvanized Steel: ANSI A250.8; shop primed.

B. Finish exposed surfaces after fabrication.

2.9 ACCESSORIES

A. Primers: ANSI A250.8.

B. Barrier Coating: ASTM D1187/D1187M.

C. Welding Materials: AWS D1.1/D1.1M, type to suit application.

D. Clips Connecting Members and Sleeves: Match door faces.

E. Fasteners: Galvanized steel.
   1. Metal Framing: Steel drill screws.
   2. Masonry and Concrete: Expansion bolts.
F. Anchors: Galvanized steel.
G. Galvanizing Repair Paint: MPI No. 18.
H. Insulation: Unfaced mineral wool.

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine and verify substrate suitability for product installation.
B. Protect existing construction and completed work from damage.
C. Apply barrier coating to metal surfaces in contact with cementitious materials to minimum 0.7 mm (30 mils) dry film thickness.

3.2 INSTALLATION - GENERAL

A. Install products according to manufacturer's instructions and approved submittal drawings.
   1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.
   2. Install fire doors and frames according to NFPA 80.
   3. Install smoke control doors and frames according to NFPA 105.

3.3 FRAME INSTALLATION

A. Apply barrier coating to concealed surfaces of frames built into masonry.
B. Plumb, align, and brace frames until permanent anchors are set.
   1. Use triangular bracing near each corner on both sides of frames with temporary wood spreaders at midpoint.
   2. Use wood spreaders at bottom of frame when shipping spreader is removed.
   3. Where construction permits concealment, leave shipping spreaders in place after installation, otherwise remove spreaders when frames are set and anchored.
   4. Remove wood spreaders and braces when walls are built and jamb anchors are secured.
C. Floor Anchors:
   1. Anchor frame jambs to floor with two expansion bolts.
      a. Lead Lined Frames: Use 9 mm (3/8 inch) diameter bolts.

b. Other Frames: Use 6 mm (1/4 inch) diameter bolts.

2. Power actuated drive pins are acceptable to secure frame anchors to concrete floors.

D. Jamb Anchors:

1. Masonry Walls:

a. Embed anchors in mortar.

b. Fill space between frame and masonry with grout or mortar as walls are built.

2. Metal Framed Walls: Secure anchors to sides of studs with two fasteners through anchor tabs.

3. Prepared Masonry and Concrete Openings:

a. Direct Securement: 6 mm (1/4 inch) diameter expansion bolts through spacers.

b. Subframe or Rough Buck Securement:

1) 6 mm (1/4 inch) diameter expansion bolts on 600 mm (24 inch) centers.

2) Power activated drive pins on 600 mm (24 inches) centers.

c. Secure two-piece frames to subframe or rough buck with machine screws on both faces.

E. Frames for Sound Rated Doors: Fill frames with insulation.

F. Touch up damaged factory finishes.

1. Repair galvanized surfaces with galvanized repair paint.

2. Repair painted surfaces with touch up primer.

3.4 DOOR INSTALLATION

A. Install doors plumb and level.

B. Adjust doors for smooth operation.

C. Touch up damaged factory finishes.

1. Repair galvanized surfaces with galvanized repair paint.

2. Repair painted surfaces with touch up primer.

3.5 CLEANING

A. Clean exposed door and frame surfaces. Remove contaminants and stains.

3.6 PROTECTION

A. Protect doors and frames from construction operations.

B. Remove protective materials immediately before acceptance.

C. Repair damage.

- - - E N D - - -

SECTION 08 41 13
ALUMINUM-FRAMED STOREFRONTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Aluminum-framed storefronts.

1.2 RELATED REQUIREMENTS

A. Glass and Glazing: Section 08 80 00, GLAZING.

B. Aluminum Finish and Color: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 APPLICABLE PUBLICATIONS

A. Comply with references to extent specified in this section.

B. American Architectural Manufacturers Associations (AAMA):

2603-15 .....Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels

2604-13 .....Performance Requirements and Test Procedures or High Performance Organic Coatings on Architectural Extrusions and Panels

2605-13 .....Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels

C. American Welding Society (AWS):

D1.2/D1.2M-14 .....Structural Welding Code - Aluminum

D. ASTM International (ASTM):

A240/A240M-20 .....Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

B209-14 .....Aluminum and Aluminum-Alloy Sheet and Plate.

B209M-14 .....Aluminum and Aluminum-Alloy Sheet and Plate (Metric)

B221-14 .....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

B221M-13 .....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric)

D1187/D1187M-97(2018) ..Asphalt-Base Emulsions for Use as Protective Coatings for Metal

E283/E283M-19 .....Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

E330/E330M-14 .....Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

E331-00(2016) .....Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference

E1886-19 .....Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missiles and Exposes to Cyclic Pressure Differentials

E1996-17 .....Performance of Exterior Windows, Curtain Walls, Doors, and impact Protective Systems Impacted by Windborne Debris in Hurricanes

F468-16 .....Nonferrous Bolts, Hex Cap Screws, and Studs for General Use

F593-17 .....Stainless Steel Bolts, Hex Cap Screws, and Studs

E. National Association of Architectural Metal Manufacturers (NAAMM):

AMP 500-06 .....Metal Finishes Manual

F. National Fenestration Rating Council (NFRC):

500-14(E1A0) .....Determining Fenestration Product Condensation Resistance Values

G. Department of Veterans Affairs(VA):

1. VA Physical Security and Resiliency Design Manual October 1, 2020

1.4 PREINSTALLATION MEETINGS

A. Conduct preinstallation meeting minimum 30 days before beginning Work of this section.

1. Required Participants:

a. Contracting Officer's Representative.

b. Contractor.

c. Installer.

2. Meeting Agenda: Distribute agenda to participants minimum 3 days before meeting.
   a. Installation schedule.
   b. Installation sequence.
   c. Preparatory work.
   d. Protection before, during, and after installation.
   e. Installation.
   f. Terminations.
   g. Transitions and connections to other work.
   h. Other items affecting successful completion.
3. Document and distribute meeting minutes to participants to record decisions affecting installation.

1.5 SUBMITTALS

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Submittal Drawings: Minimum 1 to 2 (half size) scale.
   1. Show size, configuration, and fabrication and installation details.
   2. Show anchorage and reinforcement.
   3. Show interface and relationship to adjacent work.

C. Manufacturer's Literature and Data:
   1. Description of each product.
   2. Storefront construction.
   3. Installation instructions.
   4. Warranty.

D. Samples:
   1. Aluminum Anodized Finish: sample extrusions minimum 150 mm (6 inches) long for each specified color in sets of three showing maximum color range.

E. Sustainable Construction Submittals:
   1. Recycled Content: Identify post-consumer and pre-consumer recycled content percentage by weight.

F. Test reports: Certify products comply with specifications.

G. Certificates: Certify products comply with specifications.
   1. Certify anodized finish thickness.

H. Qualifications: Substantiate qualifications comply with specifications.
   1. Manufacturer with project experience list.
   2. Installer with project experience list.

3. Welders and welding procedures.

I. Operation and Maintenance Data:

1. Care instructions for each exposed finish product.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Regularly manufactures specified products.
2. Manufactured specified products with satisfactory service on five similar installations for minimum five years.

B. Installer Qualifications: Manufacturer authorized representative.

1. Regularly installs specified products.
2. Installed specified products with satisfactory service on five similar installations for minimum five years.

C. Welders and Welding Procedures Qualifications: AWS D1.2/D1.2M.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver products in manufacturer's original sealed packaging.

B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, color, production run number, and manufacture date.

C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

D. Store products indoors in dry, weathertight facility.

E. Protect products from damage during handling and construction operations.

1.8 WARRANTY

A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

B. Manufacturer's Warranty: Warrant painted finish against material and manufacturing defects.

1. Warranty Period: 10 years.

PART 2 - PRODUCTS

2.1 SYSTEM PERFORMANCE

A. Design storefronts complying with specified performance:

a. Maximum Deflection: 1/175 of span, maximum with minimum 1.65 safety factor.

2. Thermal Movement: Accommodate ambient temperature range of 67 degrees C (120 degrees Fahrenheit).

3. Condensation Resistance: NFRC 500.
   a. Fixed Framing: 45 CRF, minimum.
4. Water Resistance: ASTM E331; No uncontrolled penetration at380 Pa (8 pounds/square foot), minimum, pressure differential.
5. Fixed Framing Air Infiltration Resistance: ASTM E283; 0.30 liter/second/square meter (0.06 cubic foot/minute/square foot), maximum at 300 Pa (6.24 pounds/square foot), minimum, pressure differential.

2.2 MATERIALS

A. Aluminum:
   1. Extrusions: ASTM B221M (ASTM B221).
      a. Framing: Minimum 3 mm (0.125 inch) wall thickness.
      b. Glazing Beads, Moldings, and Trim: Minimum 1.25 mm (0.050 inch) thick.
   2. Alloy 6063 temper T5 for storefronts.
   3. Alloy 6061 temper T6 for other extruded structural members.
B. Stainless Steel: ASTM A240/A240M; Type 302 or Type 304.

2.3 PRODUCTS - GENERAL

A. Basis of Design: Section 09 06 00, SCHEDULE FOR FINISHES.
B. Provide aluminum framed entrances and storefronts from one manufacturer and from one production run.
C. Provide aluminum entrances, storefront systems from same manufacturer.
D. Sustainable Construction Requirements:
   1. Aluminum Recycled Content: 50 percent total recycled content, minimum.

2.4 FRAMES

A. Framing Members: Extruded aluminum.
B. Stops: Provide integral fixed stops and glass rebates and snap-on removable stops.
C. Provide concealed screws, bolts and other fasteners.
D. Secure cover boxes to frames in back of lock strike cutouts.

2.5 STILE AND RAIL DOORS (NOT USED)

2.6 FLUSH PANEL DOORS (NOT USED)

2.7 COLUMN COVERS AND TRIM (NOT USED)

2.8 FABRICATION

A. Form metal parts and fit and assemble joints, except joints designed to accommodate movement. Seal joints to resist air infiltration and water penetration.

B. Welding:

1. Make welds without distorting and discoloring exposed surfaces.
2. Clean and dress welds. Remove welding flux and weld spatter.

2.9 FINISHES

A. Aluminum Anodized Finish: NAAMM AMP 500.

1. Clear Anodized Finish: AA-C22A41; Class I Architectural, 0.018 mm (0.7 mil) thick.

2.10 ACCESSORIES

A. Dielectric Tape: Plastic, non-absorptive, with pressure sensitive adhesive; 0.18 to 0.25 mm (7 to 10 mils) thick.

B. Barrier Coating: ASTM D1187/D1187M.

C. Welding Materials: AWS D1.2/D1.2M, type to suit application.

D. Fasteners:

1. Aluminum: ASTM F468, Alloy 2024.
2. Stainless Steel: ASTM F593, Alloy Groups 1, 2 and 3.

E. Anchors: Aluminum or stainless steel; type to suit application.

F. Galvanizing Repair Paint: MPI No. 18.

G. Touch-Up Paint: Match shop finish.

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine and verify substrate suitability for product installation.

1. Coordinate floor closer installation recessed into concrete slabs.
2. Coordinate anchor installation built into masonry and concrete.

B. Protect existing construction and completed work from damage.

C. Clean substrates. Remove contaminants capable of affecting subsequently installed product's performance.

D. Apply dielectric tape or barrier coating to aluminum surfaces in contact with dissimilar metals to minimum 0.7 mm (30 mils) dry film thickness.

3.2 INSTALLATION - GENERAL

A. Install products according to manufacturer's instructions and approved submittal drawings.
   1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.

B. Install aluminum framed entrances and storefronts plumb and true, in alignment and to lines shown on drawings.

C. Anchor frames to adjoining construction at heads, jambs and sills.

D. Provide concealed aluminum clips to connect adjoining frame sections.

E. Touch up damaged factory finishes.
   1. Repair galvanized surfaces with galvanized repair paint.
   2. Repair painted surfaces with touch up primer.

F. Tolerances:
   1. Variation from Plumb, Level, Warp, and Bow: Maximum 3 mm in 3 meters (1/8 inch in 10 feet).
   2. Variation from Plane: Maximum3 mm in 3.65 meters (1/8 inch in 12 feet); 6 mm (1/4 inch) over total length.
   3. Variation from Alignment: Maximum 1.5 mm (1/16 inch) in-line offset and maximum3 mm (1/8 inch) corner offset.
   4. Variation from Square: Maximum 3 mm (1/8 inch) diagonal measurement differential.

3.3 PROTECTION, CLEANING AND REPAIRING

A. Clean exposed aluminum and glass surfaces. Remove contaminants and stains.

B. Protect aluminum-framed storefronts from construction operations.

C. Remove protective materials immediately before acceptance.

D. Repair damage.

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SECTION 08 56 53
BLAST RESISTANT WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Prefabricated fixed aluminum , blast resistant exterior window units.

1.2 RELATED REQUIREMENTS

A. Window Color: Section 09 06 00, SCHEDULE FOR FINISHES.

B. Forced entry and ballistic rated glazing: Section 08 80 00, GLAZING.

1.3 APPLICABLE PUBLICATIONS

A. Comply with references to extent specified in this Section.

B. American Architectural Manufacturers Association (AAMA):
AAMA/WDMA/CSA 101/I.S.2/A440-11 Windows, Doors, and Skylights

C. American Welding Society (AWS):
D1.1/D1.1M-15 .....Structural Welding Code - Steel
D1.3/D1.3M-08 .....Structural Welding Code - Sheet Steel
D1.6/D1.6M-07 .....Structural Welding Code - Stainless Steel

D. ASTM International (ASTM):
A36/A36M-19 .....Carbon Structural Steel
A123/A123M-17 .....Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
A320/A320M-18 .....Alloy-Steel and Stainless Steel Bolting Materials for Low-Temperature Service
A666-15 .....Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate and Flat Bar
B221-14 .....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
B221M-13 .....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
E283/A283M-18 .....Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

E331-00(2016) .....Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference

SPEC WRITER NOTE: Depending on the rating needed this reference can be used.

F1233-08(2019) .....Standard Test Method for Security Glazing Materials and Systems

F1642/F1642M-17 .....Standard Test Method for Glazing and Glazing Systems Subject to Air blast Loadings

E. National Association of Architectural Metal Manufactures (NAAMM):

AMP 500-06 .....Metal Finishes Manual

F. UL LLC (UL):

752-10(R2013) .....Bullet Resisting Equipment

G. Department of Veterans Affairs:

VA Physical Security and Resiliency Design Manual October 1, 2020

1.4 PREINSTALLATION MEETINGS

A. Conduct preinstallation meeting at project site minimum 30 days before beginning Work of this Section.

1. Required Participants:
   a. Contracting Officer's Representative.
   b. Contractor.
   c. Installer.
   d. Manufacturer's field representative.
   e. Other installers responsible for adjacent and intersecting work.
2. Meeting Agenda: Distribute agenda to participants minimum 3 days before meeting.
   a. Installation schedule.
   b. Installation sequence.
   c. Preparatory work.
   d. Protection before, during, and after installation.
   e. Installation.
   f. Transitions and connections to other work.
   g. Inspecting and testing.
   h. Other items affecting successful completion.
3. Document and distribute meeting minutes to participants to record decisions affecting installation.

1.5 SUBMITTALS

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

B. Submittal Drawings:

1. Show dimensioned details of window units, including intended metal and glazing materials. 1: 20 (Three quarter inch equals 1 foot) scaled elevations showing interior and exterior. Indicated how window units can be replaced or removed, including replacement of glazing. Shop drawings shall be submitted for review and approval prior to fabrication. The contractor is responsible for all field verification of existing conditions and dimensions for new construction that is being conducted adjacent to or integral with existing construction. The field verification shall be conducted and incorporated in the submitted shop drawings and calculations prior to submission. Blast calculations and or testing data shall be submitted with the shop drawings.
2. Show detailed sections at 1: 5 (3 inch equal 1 foot) scale for members; indicating construction, size, and thickness of components, together with connections, fasteners, and means of separating dissimilar metals.
3. Provide final submittal drawings as DWG AutoCAD files.

C. Manufacturer's Literature and Data:

1. Description of each product, metal, and alloy when applicable.
2. Indicate manufacturer's recommendations for fasteners, welding, applied finishes, hardware and accessories.
3. Installation instructions.
4. Standard color chart.

D. Sustainable Construction Submittals:

1. Recycled Content: Identify post-consumer and pre-consumer recycled content percentage by weight.

E. Certificates: Indicate each product complies with specifications.

1. Window forced entry resistance.
2. Window blast resistance.

F. Calculations: Submit calculations for review and approval prepared by qualified blast consultant, with a minimum of 5 years of experience in design of blast resistant window systems, verifying window and glazing assembly including anchors comply with specified blast resistance

performance given in Section 2.1.a of this specification. Dynamic analysis of the glass response must be performed using window glazing blast analysis software developed by the UD Government, such as SBEDS-W v1.0 or WINDGARD PE v5.5 or later, which are capable of predicting the glass, film and laminate response when subjected to the blast loading environment.

G. Qualifications: Substantiate qualifications comply with specifications.
   1. Manufacturer with project experience list demonstrating a minimum of 5 years of experience manufacturing blast resistant windows.
   2. Installer with project experience list demonstrating a minimum of 5 years of experience installing blast resistant windows.
   3. Welders and welding procedures.

1.6 QUALITY ASSURANCE

A. Manufacturer and Installer Qualifications:
   1. Regularly manufactures and installs specified products.
   2. Manufactured and installed specified products with satisfactory service on five similar installations for minimum five years.
      a. Provide contact names and addresses for completed projects when requested by Contracting Officer's Representative.

B. Welders and Welding Procedures Qualifications:
   1. Stainless Steel: AWS D1.6/D1.6M.
   2. Steel: AWS D1.1/D1.1M.
   3. Sheet Steel: AWS D1.3/D1.3M.

1.7 DELIVERY

A. Deliver prefabricated unit in manufacturer's original sealed packaging.

B. Mark packaging, legibly. Indicate manufacturer's name or brand, unit type, and manufacture date.

C. Before installation, return or dispose of products within distorted, damaged, wet, or opened packaging.

1.8 STORAGE AND HANDLING

A. Store products indoors in dry, weathertight facility.

B. Protect products from damage during handling and construction operations.

1.9 FIELD CONDITIONS

A. Field Measurements: Verify field conditions affecting window fabrication and installation. The field verification shall be conducted

and incorporated in the submitted shop drawings and calculations prior to submission. Show field measurements on Submittal Drawings.

1. Coordinate field measurement and fabrication schedule to avoid delay.

1.10 WARRANTY

A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

PART 2 - PRODUCTS

2.1 SYSTEM PERFORMANCE

A. Design exterior windows complying with specified performance:
   1. Comply with blast-resistant design requirements as follows:
      a. Design blast Load: Peak reflected pressure of 70 psi and reflected impulse of 112 psi-msec (3.2 msec equivalent triangular load duration). Note that the design blast load is larger than the blast load specified in the VA Physical Security Design Manual due to reduced standoff distance.
      b. Glazing must be laminated glass (for IGUs, laminated glass is required only for the inner lite). Glass shall be restrained within the mullions with a minimum ½" bite and minimum 3/8" wide continuous bead of structural silicone adhesive attaching the inner lite of the glass to the frame.
      c. Glazing performance condition shall achieve GSA Performance Condition 2 or ASTM F1642 Minimal Hazard rating (i.e., glass is allowed to crack but must remain in the frame) or better in response to the specified design blast load, per Section 08 80 00 (GLAZING) of the specifications.
      d. Frames and mullions must be designed to resist the specified design blast load while sustaining maximum deformations no greater than L/40 (or 3 degrees support rotation). In addition, the frames and mullions must be designed to resist the balanced blast load (maximum blast load capacity of the weakest lite of supported glass), but no less than the design blast load, while sustaining maximum deformations no greater than L/20 (or 6 degrees support rotation).
      e. Frames and mullions must be designed using dynamic analysis methods per Section 6.7.3 of the VA Physical Security Design Manual. Alternatively, in lieu of dynamic analysis, glazed

aluminum framed systems may be certified through testing (Standard Test Method for Glazing Systems Subject to Airblast Loadings ASTM F1642) against the specified design blast load. When testing is used in lieu of dynamic analysis, the tested assembly must be demonstrated to be sufficiently similar in glazing layup, mullions, frames, connections, and hardware to that being constructed for the project.

f. Connections between framing members and connections of the frame members to the supporting structure must be designed to resist the applied blast loads and develop the ultimate flexural capacity of the supported members. Alternatively, for members that are designed to resist the design blast load elastically (ductility less than 1), the connections may be designed for the calculated maximum resistance of the members (based on the calculated maximum dynamic response) increased by a 1.5 factor of safety, but not larger than the equivalent static reactions based on the ultimate flexural capacity of the member. The capacity of the connections must be calculated as the LRFD capacity including strength reduction factors per appropriate design codes for each material.

2. Provide indicated levels of resistance for blast resistant window assemblies. Resistance level applies to anchorages, interfaces with adjoining substrates, glass retention, and hardware.
3. Would be attackers cannot penetrate through secure closed window assembly.
4. Provide combined performances within rating limitations knowing certain attacks can result in severe damage to unit and require replacement.
5. ASTM F1233 and AAMA/WDMA/CSA 101/I.S.2/A440.

B. Blast Resistant (BR) Assemblies: Manufacturer's window unit assembled with panels, inserts, glazing and framing.
   1. Provide BR rated units where shown or scheduled:
      a. As required to meet the blast performance requirements listed in this specification

C. Thermal Movement: Assembly capable of withstanding thermal movements resulting from ambient range of 67 degrees C (150 degrees F) to 82 degrees C (180 degrees F).

D. Design Performance: Comply with structural performance, air infiltration, and water penetration requirements indicated in AAMA/WDMA/CSA 101/I.S.2/A440 for AW Class.
   1. Wind Load Resistance: ASCE/SEI 7; Design criteria as indicated on Drawings.
   2. Water Infiltration: ASTM E331; no uncontrolled penetration at 300 Pa (6.2 psf), minimum, pressure differential.
   3. Air Infiltration: ASTM E283; Maximum 6 liter/second/square meter (0.1 cubic feet/minute/square foot.) at static pressure difference of 300 Pa (6.2 pound square foot).

2.2 MATERIALS

A. Stainless Steel: ASTM A666, Type 304; formed stainless steel members.
B. Aluminum Extrusions: ASTM B221.
   1. Framing Members: Alloy 6063-T5, -T6, or -T52, or alloy 6061-T6; 5 mm (3/16 inch) minimum thickness.
   2. Trim and Stops not exposed to forced entry attack: Alloy 6063-T5, -T6, or -T52; 1.5 mm (1/16 inch) minimum thickness.
C. Steel Shapes/Plates/Bars: ASTM A36/A36M, except where another designation is indicated.
D. Bolts and Fasteners: ASTM A320/A320M; Type 300-series stainless steel screws, bolts, nuts, and washers. Non-removable type where accessible from attack side.
E. Window Cleaner's Bolts: Nonmagnetic stainless steel, complying with safety regulations for window cleaning equipment.
F. Glazing Materials: Rated laminated assembly as specified in Section 08 80 00, GLAZING.

2.3 PRODUCTS - GENERAL

A. Provide blast resistant windows from one manufacturer.
B. Sustainable Construction Requirements:
   1. Steel Recycled Content: 30 percent total recycled content, minimum.
   2. Stainless Steel Recycled Content: 70 percent total recycled content, minimum.
   3. Aluminum Recycled Content: 80 total recycled content, minimum.

2.4 FABRICATION

A. Assemblies: Shop fabricate matching profiles indicated on Drawings. Make welds that comply with AWS standards; exposed welds ground smooth. Provide welded-in-place reinforcements and anchorage devices.

1. Removable Glazing Stops: Applied to room side of window.
   a. Miter and weld removable stops at corners.
   b. Secure removable stops to frames with countersunk screws, spaced as required for specified performance requirements.
2. New Building: Frame system with inner frame, outer frame, and fasteners to connect frames together.
   a. Fabricate continuous outer frame for masonry or concrete embedment as exterior wall is constructed.
   b. Preassemble inner frame with glazing for bolting to outer frame.
   c. Provide both frames shall be supplied by one manufacturer.
   d. Anchorage: Provide anchors as required to meet the project loading requirements.
3. Existing Buildings: Fabricate continuous frame for anchoring to supporting structural elements shown on the drawings.
   a. Provide both inner and outer frames by one manufacturer.
   b. Anchorage: Provide anchors as required to meet the project loading requirements

B. Unit Anchorages: Fabricate metal anchorage system complying with performance requirements.

C. Unit Glazing: Laminated glass assembly meeting the blast performance requirements as specified in Section 08 80 00, GLAZING. Where tested glazed systems do not match the project dimensional requirements, submit calculations prepared by a qualified blast consultant using accepted dynamic methods that demonstrate the submitted system meets the project requirements.

2.5 FINISHES

A. General: Finish fabricated units including framing, sub-framing, hardware, and accessories.
   1. Colors : Refer to Section 09 06 00, SCHEDULE FOR FINISHES.

B. Steel Surfaces: ASTM A123/A123M galvanized.

C. Stainless Steel: NAAMM AMP 500; No. 4 polished finish, except retain manufacturer's standard mill finish on exposed fasteners and similar devices.

D. Blend welds to match adjacent finish.

E. Aluminum Anodized Finish: NAAMM AMP 500.
   1. Clear Anodized Finish: AA-C22A41; Class I Architectural, 0.018 mm (0.7 mil) thick.

2. Color Anodized Finish: AA-C22A42 or AA-C22A44; Class I Architectural, 0.018 mm (0.7 mil) thick.

F. Aluminum Paint Finish:

1. Fluorocarbon Finish: AAMA 2605; 70 percent fluoropolymer resin, 2-coat system.

2.6 ACCESSORIES

A. Bituminous Paint: SSPC Paint 12 (cold-applied asphalt mastic).

B. Welding Materials: Type to suit application for color match, strength and compatibility in fabricated item.

1. Stainless Steel: AWS D1.6/D1.6M, TIG using rods made from alloyed Type 308 stainless steel.
2. Steel: D1.1/D1.1M.
3. Steel Sheet: D1.3/D1.3M-08.

C. Galvanizing Repair Paint: MPI No. 18.

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine and verify substrate suitability for product installation.

1. Verify opening is correctly sized and located.
2. Verify substrate is prepared to receive frame anchors.

B. Protect existing construction and completed work from damage.

C. Apply bituminous coating approximately 30 mils dry film thickness, or other suitable permanent separator, on surfaces of dissimilar metals, and metal surfaces in contact with concrete.

1. Where the metals are exposed to view, provide a plastic or neoprene separator between dissimilar metals.

3.2 INSTALLATION

A. Install products according to manufacturer's instructions.

B. Install window units according to manufacturer's installation instructions.

C. Set units accurately, plumb, and level.

D. Securely anchor to masonry or concrete framing as shown on approved submittal drawings to withstand specified performance.

E. Touch up damaged factory finishes.

1. Repair galvanized surfaces with galvanized repair paint.

3.3 CLEANING

A. Clean exposed window surfaces. Remove temporary labels, contaminants, and stains.

B. Clean glazing according to Section 08 80 00, GLAZING.

3.4 PROTECTION

A. Protect window units from construction operations.

B. Remove protective materials immediately before acceptance.

C. Repair damage.

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SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Door hardware and related items necessary for complete installation and operation of doors.

1.2 RELATED WORK

A. Caulking: Section 07 92 00 JOINT SEALANTS.

B. Application of Hardware: Section 08 14 00, WOOD DOORS , Section 08 11 13, HOLLOW METAL DOORS AND FRAMES Section 08 71 13.11, LOW ENERGY DOOR OPERATORS C. Finishes: Section 09 06 00, SCHEDULE FOR FINISHES.

D. Painting: Section 09 91 00, PAINTING.

E. Card Readers: Section 28 13 11, PHYSICAL ACCESS CONTROL SYSTEMS.

F. Electrical: Division 26, ELECTRICAL.

1.3 GENERAL

A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.

B. Provide rated door hardware assemblies where required by most current version of the International Building Code (IBC).

C. Hardware for Labeled Fire Doors and Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.

D. Hardware for application on metal and wood doors and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.

E. The following items shall be of the same manufacturer, except

as otherwise specified:

1. Mortise locksets.
2. Hinges for hollow metal and wood doors.
3. Surface applied overhead door closers.
4. Exit devices.

1.4 WARRANTY

A. Automatic door operators shall be subject to the terms of FAR Clause 52.246-21, except that the Warranty period shall be two years in lieu of one year for all items except as noted below:

1. Locks, latch sets, and panic hardware: 5 years.
2. Door closers and continuous hinges: 10 years.

1.5 MAINTENANCE MANUALS

A. In accordance with Section 01 00 00, GENERAL REQUIREMENTS Article titled "INSTRUCTIONS", furnish maintenance manuals and instructions on all door hardware. Provide installation instructions with the submittal documentation.

1.6 SUBMITTALS

A. Submittals shall be in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. Submit 6 copies of the schedule per Section 01 33 23. Submit 2 final copies of the final approved schedules to VAMC Locksmith as record copies (VISN Locksmith if the VAMC does not have a locksmith).

B. Hardware Schedule: Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publication Type No.	Finish	Mfr. Name and Catalog No.	Key Control Symbols	UL Mark (if fire rated and listed)	ANSI/BHMA Finish Designation

C. Samples and Manufacturers' Literature:

1. Samples: All hardware items (proposed for the project) that have

not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.

2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.

1.7 DELIVERY AND MARKING

A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to Resident Engineer for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in Resident Engineer's office until all other similar items have been installed in project, at which time the Resident Engineer will deliver items on file to Contractor for installation in predetermined locations on the project.

1.8 INSTRUCTIONS

A. Hardware Set Symbols on Drawings: Except for protective plates, door stops, mutes, thresholds and the like specified herein, hardware requirements for each door are indicated on drawings by symbols. Symbols for hardware sets consist of letters (e.g., "HW") followed by a number. Each number designates a set of hardware items applicable to a door type.

B. Keying: All cylinders shall be keyed into existing _Falcon Great Grand Master Key System . Provide interchangeable core cylinders that are removable only with a special key without disassembly of knob or lockset . Cylinders shall be 6 pin “D” keyway, uncombinated standard cores. (Standard cores use a single spring cover to seal pin chambers, not individual chamber seals). Keying information shall be furnished at a later date by the Resident Engineer.

1.9 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to

by series, types, etc., listed in such specifications and standards, except as otherwise specified.

B. American Society for Testing and Materials
(ASTM): F883-04..... Padlocks
E2180-07.....Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials

C. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
A156.1-06.....Butts and Hinges
A156.3-08.....Exit Devices, Coordinators, and Auto Flush
Bolts
A156.4-08.....Door Controls (Closers)
A156.5-14.....Cylinders and Input Devices for Locks.
A156.6-05.....Architectural Door Trim
A156.8-05.....Door Controls-Overhead Stops and Holders A156.11-14.....Cabinet Locks
A156.13-05.....Mortise Locks and Latches Series 1000
A156.15-06.....Release Devices-Closer Holder, Electromagnetic and Electromechanical
A156.16-08.....Auxiliary Hardware

A156.18-06.....Materials and Finishes
A156.21-09..... Thresholds
A156.22-05.....Door Gasketing and Edge Seal Systems A156.23-04.....Electromagnetic Locks
A156.24-03.....Delayed Egress Locking Systems
A156.25-07 .....Electrified Locking Devices
A156.26-06.....Continuous Hinges
A156.28-07 .....Master Keying Systems
A156.29-07 .....Exit Locks and Alarms
A156.30-03 .....High Security Cylinders
A156.31-07 .....Electric Strikes and Frame Mounted

Actuators A156.36-10.....Auxiliary Locks

A250.8-03.....Standard Steel Doors and Frames

D. National Fire Protection Association (NFPA):

80-10.....Fire Doors and Other Opening Protectives

101-09.....Life Safety Code

E. Underwriters Laboratories, Inc.

(UL): Building Materials Directory

(2008)

PART 2 - PRODUCTS

2.1 BUTT HINGES

A. ANSI A156.1. Provide only three-knuckle hinges, except five-knuckle where the required hinge type is not available in a three-knuckle version (e.g., some types of swing-clear hinges). The following types

of butt hinges shall be used for the types of doors listed, except where otherwise specified:

1. Exterior Doors: Type A2112/A5112 for doors 900 mm (3 feet) wide or less and Type A2111/A5111 for doors over 900 mm (3 feet) wide. Hinges for exterior outswing doors shall have non-removable pins. Hinges for exterior fire-rated doors shall be of stainless steel material.
2. Interior Doors: Type A8112/A5112 for doors 900 mm (3 feet) wide or less and Type A8111/A5111 for doors over 900 mm (3 feet) wide. Hinges for doors exposed to high humidity areas (shower rooms, toilet rooms, kitchens, janitor rooms, etc. shall be of stainless steel material.

B. Provide quantity and size of hinges per door leaf as follows:

1. Doors up to 1210 mm (4 feet) high: 2 hinges.
2. Doors 1210 mm (4 feet) to 2260 mm (7 feet 5 inches) high: 3 hinges minimum.
3. Doors greater than 2260 mm (7 feet 5 inches) high: 4 hinges.
4. Doors up to 900 mm (3 feet) wide, standard weight: 114 mm x 114 mm (4-1/2 inches x 4-1/2 inches) hinges.
5. Doors over 900 mm (3 feet) to 1065 mm (3 feet 6 inches) wide, standard weight: 127 mm x 114 mm (5 inches x 4-1/2

inches).

6. Doors over 1065 mm (3 feet 6 inches) to 1210 mm (4 feet), heavy weight: 127 mm x 114 mm (5 inches x 4-1/2 inches).
7. Provide heavy-weight hinges where specified.
8. At doors weighing 330 kg (150 lbs.) or more, furnish 127 mm (5 inch) high hinges.

C. See Articles "MISCELLANEOUS HARDWARE" and "HARDWARE SETS" for pivots and hinges other than butts specified above and continuous hinges specified below.

2.2 OVERHEAD CLOSERS

A. Conform to ANSI A156.4, Grade 1.

B. Closers shall conform to the following:

1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
2. Where specified, closer shall have hold-open feature.
3. Size Requirements: Provide multi-size closers, sizes 1 through 6, except where multi-size closer is not available for the required application.
4. Material of closer body shall be forged or cast.
5. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
6. Where closers are exposed to the exterior or are mounted in rooms that experience high humidity, provide closer body and arm assembly of stainless steel material.
7. Closers shall have full size metal cover; plastic covers will not be accepted.
8. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
9. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm

assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.

10. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.

11. Provide parallel arm closers with heavy duty rigid arm.

12. Where closers are to be installed on the push side of the door,

provide parallel arm type except where conditions require use of top jamb arm.

13. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.

14. All closers shall have a 1 ½" (38mm) minimum piston diameter.

2.3 DOORSTOPS

A. Conform to ANSI A156.16.

B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. Use wall stops at all doors, or overhead stops where wall stops cannot be used. For concrete, masonry or quarry tile construction, use lead expansion shields for mounting door stops.

C. Where cylindrical locks with turn pieces or pushbuttons occur, equip wall bumpers Type L02251 (rubber pads having concave face) to receive turn piece or button.

D. Provide floor stops (Type L02141 or L02161 in office areas; Type L02121 x 3 screws into floor elsewhere. Wall bumpers, where used, must be installed to impact the trim or the door within the leading half of its width. Floor stops, where used, must be installed within 4-inches of the wall face and impact the door within the leading half of its width.

E. Where drywall partitions occur, use wall stops, Type Type L02251.

F. Provide stop Type L02011, as applicable for exterior doors. At outswing doors where stop can be installed in concrete, provide stop mated to concrete anchor set in 76mm (3-inch) core-drilled

hole and filled with quick-setting cement.

G. Omit stops where floor mounted door holders are required and where automatic operated doors occur.

H. Provide appropriate roller bumper for each set of doors (except where closet doors occur) where two doors would interfere with each other in swinging.

I. Provide appropriate door mounted stop on doors in individual toilets where floor or wall mounted stops cannot be used.

J. Provide overhead surface applied stop Type C02541, ANSI A156.8 on patient toilet doors in bedrooms where toilet door could come in contact with the bedroom door.

K. Provide door stops on doors where combination closer magnetic holders are specified, except where wall stops cannot be used or where floor stops cannot be installed within 4-inches of the wall.

L. Where the specified wall or floor stop cannot be used, provide concealed overhead stops (surface-mounted where concealed cannot be used).

2.4 OVERHEAD DOOR STOPS AND HOLDERS

A. Conform to ANSI Standard A156.8. Overhead holders shall be of sizes recommended by holder manufacturer for each width of door. Set overhead holders for 110 degree opening, unless limited by building construction or equipment. Provide Grade 1 overhead concealed slide type: stop-only at rated doors and security doors, hold-open type with exposed hold- open on/off control at all other doors requiring overhead door stops.

2.5 LOCKS AND LATCHES

A. Conform to ANSI A156.2. Locks and latches for doors 45 mm (1-3/4 inch) thick or over shall have beveled fronts. Lock cylinders shall have not less than six pins . Cylinders for all locksets shall be interchangeable core cylinders that are removable only with a special key without disassembly of knob or lockset. Cylinders shall be 6 pin “D” keyway, uncombinated standard cores. (Standard cores use a single spring cover to seal pin chambers, not individual chamber seals)..

Cylinders shall be furnished with construction removable cores and

construction master keys. Construct all cores so that they will be interchangeable into the core housings of all mortise locks, rim locks, cylindrical locks, and any other type lock included in the Great Grand Master Key System. Disassembly of lever or lockset shall not be required to remove core from lockset. All locksets or latches on double doors with fire label shall have latch bolt with 19 mm (3/4 inch) throw unless shorter throw allowed by the door manufacturer's fire label. Provide temporary keying device or construction core to allow opening and closing during construction and prior to the installation of final cores.

B. In addition to above requirements, locks and latches shall comply with following requirements:

1. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements. Cylindrical locksets shall be series 4000 Grade I. All locks and latch sets shall be furnished with
   122.55 mm (4-7/8-inch) curved lip strike and wrought box. At outswing pairs with overlapping astragals, provide flat lip strip with 21mm (7/8-inch) lip-to-center dimension. Provide lever design to match design selected by Architect or to match existing lever design. Where two turn pieces are specified for lock F76, turn piece on inside knob shall lock and unlock inside knob, and turn piece on outside knob shall unlock outside knob when inside knob is in the locked position. (This function is intended to allow emergency entry into these rooms without an emergency key or any special tool.)
2. Auxiliary locks shall be as specified under hardware sets and conform to ANSI A156.36.
3. Locks on designated doors in Psychiatric (Mental Health) areas shall be paddle type with arrow projection covers and be UL Listed. Provide these locks with paddle in the down position on both sides of the door. Locks shall be fabricated of wrought stainless steel.
4. Privacy locks in non-mental-health patient rooms shall have an inside thumb turn for privacy and an outside thumb turn for emergency entrance. Single occupancy patient privacy doors

shall typically swing out; where such doors cannot swing out, provide center-pivoted doors with rescue hardware (see HW-2B).

2.6 PUSH-BUTTON COMBINATION LOCKS

A. ANSI/BHMA A156.5, Grade 1. Battery operated pushbutton entry.

B. Construction: Heavy duty mortise lock housing conforming to ANSI/BHMA A156.13, Grade 1. Lever handles and operating components in compliance with the UFAS and the ADA Accessibility Guidelines. Match lever handles of locks and latch sets on adjacent doors.

C. Special Features: Key override to permit a master keyed security system and a pushbutton security code activated passage feature to allow access without using the entry code.

2.7 ELECTRIC STRIKES

A. ANSI/ BHMA A156.31 Grade 1.

B. GENERAL: USE FAIL-SECURE ELECTRIC STRIKES AT FIRE-RATED DOORS.2.13 KEYS

A. Stamp all keys with change number and key set symbol. Furnish keys in quantities as follows:

Locks/Keys	Quantity
Cylinder locks	2 keys each
Cylinder lock change key blanks	100 each different keyway
Master-keyed sets	6 keys each
Grand Master sets	6 keys each
Great Grand Master set	5 keys
Control key	2 keys

2.8 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING

A. Conform to ANSI Standard A156.6.

B. Provide protective plates and door edging as specified below:

1. Kick plates, mop plates and armor plates of metal, Type J100 series.
2. Provide kick plates and mop plates where specified. Kick plates shall be 254 mm (10 inches) or 305 mm (12 inches) high. Mop plates shall be 152 mm (6 inches) high. Both kick and mop plates shall be minimum 1.27 mm (0.050 inches) thick. Provide kick and mop plates

beveled on all 4 edges (B4E). On push side of doors where jamb stop extends to floor, make kick plates 38 mm (1-1/2 inches) less than width of door, except pairs of metal doors which shall have plates
25 mm (1 inch) less than width of each door. Extend all other kick and mop plates to within 6 mm (1/4 inch) of each edge of doors. Kick and mop plates shall butt astragals. For jamb stop requirements, see specification sections pertaining to door frames.

3. Kick plates and/or mop plates are not required on following door sides:
   a. Armor plate side of doors;
   b. Exterior side of exterior doors;
   c. Closet side of closet doors;
   d. Both sides of aluminum entrance doors.
4. Armor plates for doors are listed under Article "Hardware Sets". Armor plates shall be thickness as noted in the hardware set, 875 mm (35 inches) high and 38 mm (1-1/2 inches) less than width of doors, except on pairs of metal doors. Provide armor plates beveled on all
   4 edges (B4E). Plates on pairs of metal doors shall be 25 mm (1 inch) less than width of each door. Where top of intermediate rail of door is less than 875 mm (35 inches) from door bottom, extend armor plates to within 13 mm (1/2 inch) of top of intermediate rail. On doors equipped with panic devices, extend armor plates to within
   13 mm (1/2 inch) of panic bolt push bar.
5. Where louver or grille occurs in lower portion of doors, substitute stretcher plate and kick plate in place of armor plate. Size of stretcher plate and kick plate shall be 254 mm (10 inches) high.
6. Provide stainless steel edge guards where so specified at wood doors. Provide mortised type instead of surface type except where door construction and/or ratings will not allow. Provide edge guards of bevel and thickness to match wood door. Provide edge guards with factory cut-outs for door hardware that must be

installed through or extend through the edge guard. Provide full-height edge guards except where door rating does not allow; in such cases, provide edge guards to height of bottom of typical lockset armor front. Forward edge guards to wood door manufacturer for factory installation on doors.

7. Factory-installed protection plates shall be installed in

C. Provide protective plates as specified in Section 10 26 00 Wall and Door Protection.

2.9 EXIT DEVICES

A. Conform to ANSI Standard A156.3. Exit devices shall be Grade 1; type and function are specified in hardware sets. Provide flush with finished floor strikes for vertical rod exit devices in interior of building. Trim shall have cast satin stainless steel lever handles of design similar to locksets, unless otherwise specified. Provide key cylinders for keyed operating trim and, where specified, cylinder dogging.

B. Surface vertical rod panics shall only be provided less bottom rod; provide fire pins as required by exit device and door fire labels. Do not provide surface vertical rod panics at exterior doors.

C. Concealed vertical rod panics shall be provided less bottom rod at interior doors, unless lockable or otherwise specified; provide fire pins as required by exit device and door fire labels. Where concealed vertical rod panics are specified at exterior doors, provide with both top and bottom rods.

D. Where removable mullions are specified at pairs with rim panic devices, provide mullion with key-removable feature.

E. At non-rated openings with panic hardware, provide panic hardware with key cylinder dogging feature.

F. Exit devices for fire doors shall comply with Underwriters Laboratories, Inc., requirements for Fire Exit Hardware. Submit proof of compliance.

G. Acceptable Manufacturers:

1. Basis of Design: (Exterior Doors)Von Duprin 99NL26D3ft with 996NL Trim

a. With cylinder dogging’s and falcon 6 pin interchangeable

cores on all the egress doors.

2. Or Approved Equal.

2.10 FLUSH BOLTS (LEVER EXTENSION)

A. Conform to ANSI A156.16. Flush bolts shall be Type L24081 unless otherwise specified. Furnish proper dustproof strikes conforming to ANSI A156.16, for flush bolts required on lower part of doors.

B. Lever extension manual flush bolts shall only be used at non-fire-rated pairs for rooms only accessed by maintenance personnel.

C. Face plates for cylindrical strikes shall be rectangular and not less than 25 mm by 63 mm (1 inch by 2-1/2 inches).

D. Friction-fit cylindrical dustproof strikes with circular face plate may be used only where metal thresholds occur.

E. Provide extension rods for top bolt where door height exceeds 2184 mm (7 feet 2 inches).

2.11 FLUSH BOLTS (AUTOMATIC)

A. Conform to ANSI A156.3. Dimension of flush bolts shall conform to ANSI A115. Bolts shall conform to Underwriters Laboratories, Inc., requirements for fire door hardware. Flush bolts shall automatically latch and unlatch. Furnish dustproof strikes conforming to ANSI A156.16 for bottom flush bolt. Face plates for dustproof strike shall be rectangular and not less than 38 mm by 90 mm (1-1/2 by 3-1/2 inches).

B. At interior doors, provide auto flush bolts less bottom bolt, unless otherwise specified, except at wood pairs with fire-rating greater than
20 minutes; provide fire pins as required by auto flush bolt and door fire labels.

2.12 DOOR PULLS WITH PLATES

A. Conform to ANSI A156.6. Pull Type J401, 152 mm CTC (6 inches CTC) length by 19 mm (3/4 inches) diameter minimum with plate Type J302, 90 mm by 381 mm (3-1/2 inches by 15 inches), unless otherwise specified. Provide pull with projection of 57.2 mm (2 1/4 inches) minimum and a clearance of 38.1 mm (1 1/2 inches) minimum. Cut plates of door pull plate for cylinders, or turn pieces where required.

2.13 PUSH PLATES

A. Conform to ANSI A156.6. Metal, Type J302, 203 mm (8 inches) wide by 406.4 mm (16 inches) high. Provide metal Type J302 plates 102 mm (4 inches) wide by 406.4 mm (16 inches) high where push plates are specified for doors with stiles less than 203 mm (8 inches) wide. Cut plates for cylinders, and turn pieces where required.

2.14 COMBINATION PUSH AND PULL PLATES

A. Conform to ANSI 156.6. Type J303, stainless steel 3 mm (1/8 inch) thick, 80 mm (3-1/3 inches) wide by 800 mm (16 inches) high), top and bottom edges shall be rounded. Secure plates to wood doors with 38 mm (1-1/2 inch) long No. 12 wood screws. Cut plates for turn pieces, and cylinders where required. Pull shall be mounted down.

2.15 COORDINATORS

A. Conform to ANSI A156.16. Coordinators, when specified for fire doors, shall comply with Underwriters Laboratories, Inc., requirements for fire door hardware. Coordinator may be omitted on exterior pairs of
doors where either door will close independently regardless of the position of the other door. Coordinator may be omitted on interior pairs of non-labeled open where open back strike is used. Open back strike shall not be used on labeled doors. Paint coordinators to match door frames unless coordinators are plated. Provide bar type coordinators, except where gravity coordinators are required at acoustic pairs. For bar type coordinators, provide filler bars for full width and, as required, brackets for push-side surface mounted closers, overhead stops, and vertical rod panic strikes.

2.16 THRESHOLDS

A. Conform to ANSI A156.21, mill finish extruded aluminum, except as otherwise specified. In existing construction, thresholds shall be installed in a bed of sealant with ¼-20 stainless steel machine screws and expansion shields. In new construction, embed aluminum anchors coated with epoxy in concrete to secure thresholds. Furnish thresholds for the full width of the openings.

B. For thresholds at elevators entrances see other sections of specifications.

C. At exterior doors and any interior doors exposed to moisture,

provide threshold with non-slip abrasive finish.

D. Provide with miter returns where threshold extends more than 12 mm (0.5 inch) beyond face of frame.

2.17 AUTOMATIC DOOR BOTTOM SEAL AND RUBBER GASKET FOR LIGHT PROOF OR SOUND CONTROL DOORS

A. Conform to ANSI A156.22. Provide mortise or under-door type, except where not practical. For mortise automatic door bottoms, provide type specific for door construction (wood or metal).

2.18 WEATHERSTRIPS (FOR EXTERIOR DOORS)

A. Conform to ANSI A156.22. Air leakage shall not to exceed 0.50 CFM per foot of crack length ($0.000774 m^3/s/m$).

2.19 MISCELLANEOUS HARDWARE

A. Access Doors (including Sheet Metal, Screen and Woven Wire Mesh Types): Except for fire-rated doors and doors to Temperature Control Cabinets, equip each single or double metal access door with Lock Type E07213, conforming to ANSI A156.11. Key locks as directed. Ship lock prepaid to the door manufacturer. Hinges shall be provided by door manufacturer.

B. Cylinders for Various Partitions and Doors: Key cylinders same as entrance doors of area in which partitions and door occur, except as
otherwise specified . Provide cylinders to operate locking devices where specified for following partitions and doors:
5. Fire-rated access doors-Engineer's key set.

C. Mutes: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011 or L03021, depending on frame material, of white or light gray color, on each steel or wood door frame, except at fire-rated frames, lead-lined frames and frames for sound-resistant, lightproof and electromagnetically shielded doors. Furnish 3 mutes for single doors and 2 mutes for each pair of doors, except double-acting doors. Provide 4 mutes or silencers for frames for each Dutch type door. Provide 2 mutes for each edge of sliding door which would contact door frame.

2.20 PADLOCKS FOR VARIOUS DOORS, GATES AND HATCHES

A. ASTM E883, size 50 mm (2 inch) wide chain; furnish extended shackles

as required by job conditions. Provide padlocks, with key cylinders, for each door in following areas as noted.

2.21 THERMOSTATIC TEMPERATURE CONTROL VALVE CABINETS

A. Where lock is shown, equip each cabinet door (metal) with lock Type E06213, conforming to ANSI A156.36. Key locks in Key Sets approved by Contracting Officer. See mechanical drawings and specifications for location of cabinets.

B. Cabinet manufacturer shall supply the hinges, bolts and pulls. Ship locks to cabinet manufacturer for installation.

2.22 FINISHES

A. Unless otherwise indicated, finishes shall be as follows:

Butts	Exterior:	US32D
	Interior:	US26D
Locksets		US26D
Closers		SPRAY ALUMINUM
Exit Devices		US32D
Pushes, Pulls, Kicks		US32D
Stops, Holders		US32D
Miscellaneous		US26D/32D/28

PART 3 - EXECUTION

3.1 HARDWARE HEIGHTS

A. For new buildings locate hardware on doors at heights specified below, with all hand-operated hardware centered within 864 mm (34 inches) to 1200 mm (48 inches), unless otherwise noted:

B. Hardware Heights from Finished Floor:

1. Exit devices centerline of strike (where applicable) 1024 mm (40- 5/16 inches).
2. Locksets and latch sets centerline of strike 1024 mm (40-5/16 inches).
3. Deadlocks centerline of strike 1219 mm (48 inches).
4. Hospital arm pull 1168 mm (46 inches) to centerline of bottom supporting bracket.
5. Centerline of door pulls to be 1016 mm (40 inches).
6. Push plates and push-pull shall be 1270 mm (50 inches) to top

of plate.

7. Push-pull latch to be 1024 mm (40-5/16 inches) to centerline of strike.
8. Locate other hardware at standard commercial heights. Locate push and pull plates to prevent conflict with other hardware.

3.2 INSTALLATION

A. Closer devices, including those with hold-open features, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, inside stairs, and away from corridors except security bedroom, bathroom and anteroom doors which shall have closer installed parallel arm on exterior side of doors. At exterior doors, closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with hex nuts and bolts; foot shall be fastened to frame with machine screws.

B. Hinge Size Requirements:

Door Thickness	Door Width	Hinge Height
45 mm (1-3/4 inch)	900 mm (3 feet) and less	113 mm (4-1/2 inches)
45 mm (1-3/4 inch)	Over 900 mm (3 feet) but not more than 1200 mm (4 feet)	125 mm (5 inches)

Door Thickness	Door Width	Hinge Height
35 mm (1-3/8 inch) (hollow core wood doors)	Not over 1200 mm (4 feet)	113 mm (4-1/2 inches)

C. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.

D. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges; or, contractor may reuse existing hinges provided hinges are restored to satisfactory operating condition as approved by Resident Engineer. Existing hinges shall not be reused on door

openings having new doors and new frames. Coordinate preparation for hinge cut- outs and screw-hole locations on doors and frames.

E. Hinges Required Per Door:

Doors 1500 mm (5 ft) or less in height	2 butts
Doors over 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high	3 butts
Doors over 2280 mm (7 feet 6 inches) high	4 butts
Dutch type doors	4 butts
Doors with spring hinges 1370 mm (4 feet 6 inches) high or less	2 butts
Doors with spring hinges over 1370 mm (4 feet 6 inches)	3 butts

F. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.

G. After locks have been installed; show in presence of Resident Engineer that keys operate their respective locks in accordance with keying requirements. (All keys, Master Key level and above shall be sent Registered Mail to the Medical Center Director along with the bitting list. Also, a copy of the invoice shall be sent to the Resident Engineerfor his records.) Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

3.3 FINAL INSPECTION

A. Installer to provide letter to VA Resident/Project Engineer that upon completion, installer has visited the Project and has accomplished the following:

1. Re-adjust hardware.
2. Evaluate maintenance procedures and recommend changes or additions and instruct VA personnel.
3. Identify items that have deteriorated or failed.
4. Submit written report identifying problems.

3.4 DEMONSTRATION

A. Demonstrate efficacy of mechanical hardware and electrical, and electronic hardware systems, including adjustment and maintenance procedures, to satisfaction of Resident/Project Engineer and VA Locksmith.

3.5 HARDWARE SETS

A. Following sets of hardware correspond to hardware symbols shown on drawings. Only those hardware sets that are shown on drawings will be required. Disregard hardware sets listed in specifications but not shown on drawings.

B. Hardware Consultant working on a project will be responsible for providing additional information regarding these hardware sets. The numbers shown in the following sets come from BHMA standards.

ELECTRIC HARDWARE ABBREVIATIONS LEGEND:
ADO = Automatic Door Operator
EMCH = Electro-Mechanical Closer-Holder
MHO = Magnetic Hold-Open (wall- or floor-mounted)

See attached door hardware sets after this section.

SECTION 08 71 00
DOOR HARDWARE SETS

1. MK - McKinney
2. MR - Markar
3. SU - Securitron
4. RO - Rockwood
5. FA - Falcon
6. HS - HES
7. BU - Burns Manufacturing Inc
8. NO - Norton
9. PE - Pemko

Hardware Sets

Set: SET #HW-1

Doors: C51A
Description: PAIR CARD READER INTERLOCK AUTO OPERATOR

5	Hinge, Full Mortise, Hvy Wt (A8111)	T4A3786 (NRP) (Qty & Size as required)	US26D	MK
1	Hinge (hy wt A8111)	T4A3786 CC (Size as required)	US26D	MK
1	Flush Bolt, auto top only	2940 (Type 25)	US26D	RO
1	Storeroom Lock	MA581 DG (F07)	626	FA
2	Magnetic Lock	M62D		SU
1	Interchangeable Core	C646	626	FA
1	Electric Strike	1006-12/24 (E09322/E09321)	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Coordinator	2600 (Type 21A)	Black	RO
2	Mounting Bracket	2601	Black	RO
2	Door Operator	Operator & Actuator Switches by Section 087113		
2	Kick Plate	K1050 35" X (Sized per SFO) 4BE CSK (J101)	US32D	RO
2	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE

1	Astragal	S772D (R0E754)		PE
1	ElectroLynx Harness	CON/QC-CxxxP/QC-Cxxx (size to door/hwde width)		MK
1	ElectroLynx Harness	CON/QC-C1500P/QC-C1500		MK
1	Wall Mount Card Reader	ACCESS CONTROL READER (BY OTHERS)		
1	Motion Sensor	XMS		SU
2	Position Switch	DPS		SU
1	Power Supply	BPS-24-1		SU
1	Wiring Diagram	Riser/Point to Point		

Notes: DOOR INTERLOCKS WITH C51B LHR LEAF ONLY. IF C51B LEAF IS OPEN, DOOR POSITION SWITCH WILL SIGNAL MAGNETIC LOCK TO LOCK DOWN WHILE DOOR IS OPEN. WHEN DOOR POSITION SWITCH IS PROPERLY SEATED MAGNETIC LOCK WILL NOT BE ENERGIZED. XMS TIE INTO EGRESS SHUNT FOR NORMAL TRAFFIC ONLY AND NOT TO BE TIED INTO INTERLOCK SYSTEM. COORDINATE ALL RELAYS WITH ACCESS CONTROL PROVIDER.

Set: SET #HW-2

Doors: C51B

Description: DOUBLE EGRESS CARD READER IN/OUT AND INTERLOCK DELAYED EGRESS MAG LOCK AUTO OPERATOR

2	Continuous Hinge	FM300 x Dr Height	630	MR
2	Electric Power Transfer	EL-CEPT	630	SU
1	Magnetic Lock	iMXDa		SU
2	Fire Rated Surf Vert Rod	MEL F-24-V EO LBR-AFL CON	US32D	FA
2	Door Operator	Operator & Actuator Switches by Section 087113		
2	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Gasketing	S88D (R0E154)		PE
1	Astragal	S772D (R0E754)		PE
2	ElectroLynx Harness	CON/QC-CxxxP/QC-Cxxx (size to door/hwde width)		MK
2	ElectroLynx Harness	CON/QC-C1500P/QC-C1500		MK
2	Wall Mount Card Reader	ACCESS CONTROL READER (BY OTHERS)		
2	Position Switch	DPS		SU
1	Power Supply	BPS-24-1		SU
1	Wiring Diagram	Riser/Point to Point		

Notes: DOOR INTERLOCKS WITH C51A COORDINATE ALL RELAYS WITH ACCESS CONTROL PROVIDER. COORDINATE TIME SEQUENCE FOR RELEASE OF MAGNETIC LOCK - RETRACTION OF EXIT DEVICE ROD AND OPERATOR OPENING THE DOOR.

Set: SET #HW-3

Doors: C51C, H1, H14A, H18

Description: ACCESS CONTROL LOCK CLOSER GASKETS

3	Hinge, Full Mortise, Hvy Wt (A8111)	T4A3786 (NRP) (Qty & Size as required)	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Fail Secure Lock	MA881-24RX DG CON	626	FA
1	Interchangeable Core	C646	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE
1	ElectroLynx Harness	CON/QC-CxxxP/QC-Cxxx (size to door/hwde width)		MK
1	ElectroLynx Harness	CON/QC-C1500P/QC-C1500		MK
1	Power Supply	BPS-24-1		SU

Notes: Description of operation:
The door is normally closed and locked.
Presenting a valid credential will unlock the door, allowing entry. Free egress at all times.
Upon loss of power, the door will remain locked.
The door is monitored and the request to exit will signal a valid egress.

Set: SET #HW-4

Doors: C52A

Description: BALLISTIC EXTERIOR CARD READER ELECTRIC TRIM RIM EXIT PR

1	Continuous Hinge	FM300 x Dr Height EL-EPT	630	MR
1	Fire Rated Rim Exit	FSE RX F-25-R 510L CON	US32D	FA
1	Interchangeable Core	C646	626	FA
1	Surface Closer (C02021 PT4P)	CPS (SN 134 where required)	689	NO
1	Door Stop	470 (L02121) x 3	US26D	RO

		Fasteners	
1	Threshold	173A (J32300)	PE
1	Gasketing	2891AS (R3E164)	PE
1	Rain Guard	346C	PE
1	Sweep	3452AV (R3D534)	PE
1	ElectroLynx Harness	CON/QC-CxxxP/QC-Cxxx (size to door/hwde width)	MK
1	ElectroLynx Harness	CON/QC-C1500P/QC-C1500	MK
1	Wall Mount Card Reader	ACCESS CONTROL READER (BY OTHERS)	
1	Position Switch	DPS	SU
1	Power Supply	BPS-24-1	SU
1	Wiring Diagram	Riser/Point to Point	

Notes: Description of operation: Comply with all door criteria for ballistic rating.
The door is normally closed and locked.
Presenting a valid credential will unlock the door, allowing entry. Free egress at all times.
Upon loss of power, the door will remain locked.
The door is monitored and the request to exit will signal a valid egress.

Set: SET #HW-5

Doors: C50D, C52B

Description: RIM EXIT DEVICE ACCESS CONTROL ELECTRIFIED TRIM CPS CLOSER GASKET

3	Hinge, Full Mortise, Hvy Wt (A8111)	T4A3786 (NRP) (Qty & Size as required)	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Fire Rated Rim Exit	FSE RX F-25-R 510L CON	US32D	FA
1	Interchangeable Core	C646	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE
1	ElectroLynx Harness	CON/QC-CxxxP/QC-Cxxx (size to door/hwde width)		MK
1	ElectroLynx Harness	CON/QC-C1500P/QC-C1500		MK
1	Wall Mount Card Reader	ACCESS CONTROL READER (BY OTHERS)		

1	Position Switch	DPS	SU
1	Power Supply	BPS-24-1	SU
1	Wiring Diagram	Riser/Point to Point	

Notes: Description of operation:
The door is normally closed and locked.

Presenting a valid credential will unlock the door, allowing entry. Free egress at all times.
Upon loss of power, the door will remain locked.
The door is monitored and the request to exit will signal a valid egress.

Set: SET #HW-6

Doors: 134

Description: EXTERIOR INSWING BLAST DOOR NO CLOSER SURFACE BOLTS

2	Continuous Hinge	FM300 x Dr Height	630	MR
2	Surface Bolt	580-12 TORX	US26D	RO
1	Outside Only Deadlock	MA921	626	FA
1	Half Dummy Trim	MA12 DG	626	FA
1	Threshold	271A		PE
1	Gasketing	2891AS (R3E164)		PE
1	Rain Guard	346C		PE
2	Sweep	315CN		PE
1	Astragal	357SS 84"		PE

Notes: COMPLY WITH ALL BLAST REQUIREMENTS PER PROJECT CRITERIA. SEATED/UNSEATED AS DETERMINED BY FACILIYT. COORDINATE ALL REQUIREMENTS OF PSI CATEGORY WITH GC.

Set: SET #HW-7

Doors: H15, H24B, H25B, H26A, H26B

Description: PASSAGE LATCH ELECTRIC STRIKE AUTO OPERATOR GASKETS

3	Hinge, Full Mortise, Hvy Wt (A8111)	T4A3786 (NRP) (Qty & Size as required)	US26D	MK
1	Passage Latch	MA101 DG (F01)	626	FA
1	Electric Strike	1006-12/24 (E09322/E09321)	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Door Operator	Operator & Actuator Switches by Section 087113		
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE
1	ElectroLynx Harness	CON/QC-CxxxP/QC-Cxxx (size to door/hwde width)		MK
1	Position Switch	DPS		SU
1	Power Supply	BPS-24-1		SU

Notes: FREE INGRESS AND EGRESS. HANDS FREE ACTUATOR OPERATOR OPERATION. ELECTRIC STRIKE RELEASES WITH ACTUATOR ACTIVATION TO ALLOW

OPERATOR TO OPEN THE DOOR.
ELECTRIC STRIKE TO BE FAIL SECURE.

Set: SET #HW-8

Doors: H14B, H20AA
Description: PASSAGE LATCH CPS CLOSER GASKET

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Passage Latch	MA101 DG (F01)	626	FA
1	Surface Closer (C02021 PT4P)	CPS (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Gasketing	S88D (R0E154)		PE

Set: SET #HW-9

Doors: H2
Description: PASSAGE LATCH NO CLOSER STC GASKET

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Passage Latch	MA101 DG (F01)	626	FA
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Frame Protection Pads	ACP112BL/2		PE
1	Gasketing	S88D Double Row for Sound Assistance (R0E154)		PE
1	Auto Door Bottom, mortised	411ARL (R3G324/R3G325)		PE

Set: SET #HW-10

Doors: H12A, H13A
Description: PRIVACY NO CLOSER

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Privacy Lock	MA311 DG M (F19)	626	FA
1	Mop Plate @ inswing doors	K1050 4" x (Sized per SFO) B4E CSK (J103)	US32D	RO
1	Door Stop	470 (L02121) x 3 Fasteners	US26D	RO
3	Silencer	608 (L03011)		RO

Notes: STONE THRESHOLD BY OTHER TRADES.
.

Set: SET #HW-11

Doors: H19, H20, H20AB
Description: PASSAGE LATCH CLOSER GASKET

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Passage Latch	MA101 DG (F01)	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE

Set: SET #HW-12

Doors: A15A
Description: STOREROOM CLOSER GASKET

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Storeroom Lock	MA581 DG (F07)	626	FA
1	Interchangeable Core	C646	626	FA
1	Surface Closer (C02021 PT4P)	CPS (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Gasketing	S88D (R0E154)		PE

Set: SET #HW-13

Doors: H24A, H25A
Description: PASSAGE LATCH CLOSER AP GASKET

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Passage Latch	MA101 DG (F01)	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 35" X (Sized per SFO) 4BE CSK	US32D	RO

		(J101)		
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE

Set: SET #HW-14

Doors: H7

Description: PRIVACY W/INDICATOR SOUND GASKETS STC

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Privacy Lock	MA311 DG M (F19)	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Mop Plate @ inswing doors	K1050 4" x (Sized per SFO) B4E CSK (J103)	US32D	RO
1	Wall Stop	400 (L02101) convex	US26D	RO
1	Frame Protection Pads	ACP112BL/2		PE
2	Gasketing	S88D Double Row for Sound Assistance (R0E154)		PE
1	Auto Door Bottom, mortised	411ARL (R3G324/R3G325)		PE

Notes: STONE THRESHOLD BY OTHER TRADES.

Set: SET #HW-15

Doors: H10, H11, H4, H5, H9

Description: OFFICE/ENTRY LOCK NO CLOSER GASKETS

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Entry/Office Lock	MA521 DG (F04)	626	FA
1	Interchangeable Core	C646	626	FA
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE

Notes:

Set: SET #HW-16

Doors: H3, H6

Description: STOREROOM LOCK F07 CLOSER SOUND GASKET STC

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Storeroom Lock	MA581 DG (F07)	626	FA
1	Interchangeable Core	C646	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Mop Plate @ inswing doors	K1050 4" x (Sized per SFO) B4E CSK (J103)	US32D	RO
1	Door Stop	470 (L02121) x 3 Fasteners	US26D	RO
1	Threshold	173A (J32300)		PE
1	Frame Protection Pads	ACP112BL/2		PE
2	Gasketing	S88D Double Row for Sound Assistance (R0E154)		PE
1	Auto Door Bottom, mortised	411ARL (R3G324/R3G325)		PE

Set: SET #HW-17

Doors: H16, H22, H23

Description: STOREROOM LOCK F07 CLOSER GASKET

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Storeroom Lock	MA581 DG (F07)	626	FA
1	Interchangeable Core	C646	626	FA
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Mop Plate @ inswing doors	K1050 4" x (Sized per SFO) B4E CSK (J103)	US32D	RO
1	Wall Stop	404 (Type L02251) concave	US26D	RO
1	Gasketing	S88D (R0E154)		PE

Set: SET #HW-18

Doors: H12, H13, H8

Description: PUSH/PULL CLOSER

3	Hinge (hy wt A8111)	T4A3786 (Qty & Size as required)	US26D	MK
1	Push Plate	86 (J302)	US32D	BU
1	Door Pull w/Plate	108 (J401) x 86 (J302)	US32-316	RO
1	Surface Closer (C02011/C02021)	REG/PA (SN 134 where required)	689	NO
1	Kick Plate	K1050 10" x (Sized per SFO) 4BE CSK (J102)	US32D	RO
1	Wall Stop	404 (Type L02251) concave	US26D	RO
3	Silencer	608 (L03011)		RO

Set: SET #HW-19 - MISC

Doors: MISC

Description: MISC

1	BITTING LIST	KEY RECORDS
1	KEY BLANKS	BOX OF 50

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SECTION 08 80 00
GLAZING

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies the following:

1. Glass.
2. Glazing materials and accessories for both factory and field glazed assemblies.

1.2 RELATED WORK

A. Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS: Sustainable Design Requirements.

B. Section 08 11 13, HOLLOW METAL DOORS AND FRAMES, and Section 08 21 00, IMPACT RESISTANT INTERIOR DOORS: Sound resistant doors, Section 08 22 00 Fiberglass Reinforced Plastic (FRP) DOORS AND FRAMES.

C. Section 10 28 00, TOILET, BATH, AND LAUNDRY ACCESSORIES: Mirrors.

D. Section 08 41 13, ALUMINUM STOREFRONT: Glazed Aluminum Storefront windows.

E. Blast Resistant Windows: Section 08 56 53, BLAST RESISTANT WINDOWS.

F. Section 09 06 00, SCHEDULE FOR FINISHES: Color of spandrel glass, tinted (heat absorbing or light reducing) glass, and reflective (metallic coated) glass.

G. Section 26 05 19, LOW VOLTAGE ELECTRICAL POWER AND CONDUCTORS AND CABLES: Wiring (120 V AC, 15A or 20A).

H. Intrusion Detection: Section 28 16 11, INTRUSION DETECTION SYSTEM.

I. Section 26 05 33, RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS: Junction and Switch Boxes.

J. Section 28 13 11, PHYSICAL ACCESS CONTROL SYSTEMS: Access Control Systems.

1.3 LABELS

A. Temporary labels:

1. Provide temporary label on each light of glass identifying manufacturer or brand and glass type, quality and nominal thickness.
2. Label in accordance with NFRC label requirements.
3. Temporary labels are to remain intact until glass is approved by Contracting Officer Representative (COR).

B. Permanent labels:

1. Locate in corner for each pane.
2. Label in accordance with ANSI Z97.1 and SGCC label requirements.
   a. Tempered glass.
   b. Laminated glass or have certificate for panes without permanent label.
   c. Organic coated glass.
3. Fire rated glazing assemblies: Mark in accordance with IBC.

1.4 PERFORMANCE REQUIREMENTS

A. General: Design glazing system consistent with guidance and practices presented in the GANA Glazing Manual, GANA Laminated Glazing Manual, and GANA Sealant Manual, as applicable to project. Installed glazing is to withstand applied loads, thermal stresses, thermal movements, building movements, permitted tolerances, and combinations of these conditions without failure, including loss or glass breakage attributable to defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; unsafe engagement of the framing system; deflections beyond specified limits; or other defects in construction.

B. Glazing Unit Design: Design glass, including engineering analysis meeting requirements of authorities having jurisdiction. Thicknesses listed are minimum. Coordinate thicknesses with framing system manufacturers.

1. Design glass in accordance with ASTM E1300, and for conditions beyond the scope of ASTM E1300, by a properly substantiated structural analysis.

2. Design Wind Pressures: As indicated on construction documents.
3. Wind Design Data: As indicated on construction documents.
4. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than the structural capacity of the glazing unit, the threshold at which frame engagement is no longer safely assured, 1/100 times the short-side length, or 19 mm (0.75 inch) , whichever is less.

C. Blast- resistant glass assemblies:

1. For blast-resistant units comply with requirements in Physical Security Design Manual for VA Mission Critical Protected Facilities, and project-specific criteria provided on the drawings and specifications. All glazing for all windows, curtainwalls, storefronts and glazed doors must be designed to meet the blast-resistant design requirements per Section 6.2.1 of the 2015 Physical Security and Resiliency Design Manual for VA Mission for VA Mission Critical Facilities (PSRDM-MC,2015). Dynamic analysis. Dynamic analysis of the glass response must be performed using window glazing blast analysis software developed by the US Government, such as SBEDS-W v1.0 or WINGARD PE v5.5 or later, which are capable of predicting the glass, film and laminate response when subjected to the blast loading environment. All exterior glazing must be designed to achieve GSA Performance Condition 2 or ASTM F1642 Minimal Hazard rating (i.e., glass is allowed to crack but must remain in the frame) or better in response to a design blast load of 70 psi (peak reflected pressure) and 112 psi-msec (reflected impulse). Note that the design blast load is larger than the blast load specified in the PSRDM because available standoff distance is 25 feet (as opposed to 50 feet).

   Alternatively, in lieu of blast analysis, window systems may be certified through testing (Standard Test Method for Glazing Systems Subject to Airblast Loadings ASTM F1642) against the design blast load. All exterior glazing must use laminated glass (for IGU, laminated glass is required only for the inner lite). A minimum ½″ bite and a continuous bead of silicone adhesive shall be provided to develop post-damage glazing capacity. Blast analysis and design calculations must be performed by a licensed professional engineer with a minimum of five years of professional experience in blast-resistant design.
2. Spall Resistance: Laminated glazing is not permitted to produce spall to interior (protected side) when impacted with scheduled ballistics.
3. Tolerances:
   a. Outside dimensions: Overall outside dimensions (height and width) of laminated security glazing is to maintain tolerance of ± 3 mm (± 0.12 inch).

b. Warpage: Out-of-flat (warpage or bowing) condition of laminates is not to exceed 2.5 mm per lineal meter (0.10 inch per 3.3 lineal foot). The condition, if present, is to be localized to extent not greater than 0.75 mm (0.03 inch) for any 0.3-meter (0.98 feet) section.

D. Building Enclosure Vapor Retarder and Air Barrier:
   1. Utilize the inner pane of multiple panes sealed units for the continuity of the air barrier and vapor retarder seal.
   2. Maintain a continuous air barrier and vapor retarder throughout the glazed assembly from glass pane to heel bead of glazing sealant.

1.5 SUBMITTALS

A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
B. Sustainable Design Submittals, as described below:
   1. Volatile organic compounds per volume as specified in PART 2 - PRODUCTS.
C. Manufacturer's Certificates:
   1. Certificate stating that fire-protection and fire-resistive glazing units meet code requirements for fire-resistance-rated assembly and applicable safety glazing requirements.
   2. Certificate on solar heat gain coefficient when value is specified.
   3. Certificate on "R" value when value is specified.
   4. Certificate test reports confirming compliance with specified bullet resistive rating.
   5. Certificate that blast resistant glass meets the specified requirements.
D. Manufacturer Warranty.
E. Manufacturer's Literature and Data:
   1. Glass, each kind required.
   2. Insulating glass units.
F. Samples:
   1. Size: 305 mm by 305 mm (12 inches by 12 inches).
   2. Tinted glass.
   3. Reflective glass.
G. Preconstruction Adhesion and Compatibility Test Report: Submit glazing sealant manufacturer’s test report indicating glazing sealants were

tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery: Schedule delivery to coincide with glazing schedules so minimum handling of crates is required. Do not open crates except as required for inspection for shipping damage.

B. Storage: Store cases according to printed instructions on case, in areas least subject to traffic or falling objects. Keep storage area clean and dry.

C. Handling: Unpack cases following printed instructions on case. Stack individual windows on edge leaned slightly against upright supports with separators between each.

D. Protect laminated security glazing units against face and edge damage during entire sequence of fabrication, handling, and delivery to installation location. Provide protective covering on exposed faces of glazing plastics, and mark inside as "INTERIOR FACE" or "PROTECTED FACE":

1. Treat security glazing as fragile merchandise, and packaged and shipped in export wood cases with width end in upright position and blocked together in a mass. Storage and handling to comply with manufacturer's directions and as required to prevent edge damage or other damage to glazing resulting from effects of moisture, condensation, temperature changes, direct exposure to sun, other environmental conditions, and contact with chemical solvents.
2. Protect sealed-air-space insulating glazing units from exposure to abnormal pressure changes, as could result from substantial changes in altitude during delivery by air freight. Provide temporary breather tubes which do not nullify applicable warranties on hermetic seals.
3. Temporary protections: The glass front and polycarbonate back of glazing are to be temporarily protected with compatible, peelable, heat-resistant film which will be peeled for inspections and re-applied and finally removed after doors and windows are installed at destination. Since many adhesives will attack polycarbonate, the film used on exposed polycarbonate surfaces is to be approved and applied by manufacturer.

4. Edge protection: To cushion and protect glass clad, and polycarbonate edges from contamination or foreign matter, the four (4) edges are to be sealed the depth of glazing with continuous standard-thickness thermoplastic rubber tape. Alternatively, continuous channel shaped extrusion of thermoplastic rubber are to be used, with flanges extending into face sides of glazing.
5. Protect "Constant Temperature" units including every unit where glass sheet is directly laminated to or directly sealed with metal-tube type spacer bar to polycarbonate sheet, from exposures to ambient temperatures outside the range of 16 to 24 degrees C (60 to 75 degrees F), during the fabricating, handling, shipping, storing, installation, and subsequent protection of glazing.

1.7 PROJECT CONDITIONS:

A. Field Measurements: Field measure openings before ordering tempered glass products to assure for proper fit of field measured products.

1.8 WARRANTY

A. Construction Warranty: Comply with the FAR clause 52.246-21 “Warranty of Construction”.
B. Manufacturer Warranty: Manufacturer shall warranty their glazing from the date of installation and final acceptance by the Government as follows. Submit manufacturer warranty.
   1. Insulating glass units to remain sealed for ten (10) years.
   2. Laminated glass units to remain laminated for five (5) years.

1.9 APPLICABLE PUBLICATIONS:

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.
B. American Architectural Manufacturers Association (AAMA):

800 .....Test Methods for Sealants
810.1-77 .....Expanded Cellular Glazing Tape

C. American National Standards Institute (ANSI):

Z97.1-14 .....Safety Glazing Material Used in Building - Safety Performance Specifications and Methods of Test

D. American Society of Civil Engineers (ASCE):

7-10 .....Wind Load Provisions

E. ASTM International (ASTM):

C542-05(2017) .....Lock-Strip Gaskets

C716-06(2020) .....Installing Lock-Strip Gaskets and Infill Glazing Materials

C794-18 .....Adhesion-in-Peel of Elastomeric Joint Sealants

C864-05(2019) .....Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers

C920-18 .....Elastomeric Joint Sealants

C964-20 .....Standard Guide for Lock-Strip Gasket Glazing

C1036-16 .....Flat Glass

C1048-18 .....Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.

C1172-19 .....Laminated Architectural Flat Glass

C1349-17 .....Standard Specification for Architectural Flat Glass Clad Polycarbonate

C1376-15 .....Pyrolytic and Vacuum Deposition Coatings on Flat Glass

D635-18 .....Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastic in a Horizontal Position

D4802-16 .....Poly (Methyl Methacrylate) Acrylic Plastic Sheet

E84-20 .....Surface Burning Characteristics of Building Materials

E119-20 .....Standard Test Methods for Fire Test of Building Construction and Material

E1300-16 .....Load Resistance of Glass in Buildings

E1886-19 .....Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials

E1996-17 .....Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes

E2141-14 .....Test Methods for Assessing the Durability of Absorptive Electrochromic Coatings on Sealed Insulating Glass Units

E2190-19 .....Insulating Glass Unit

E2240-06 .....Test Method for Assessing the Current-Voltage Cycling Stability at 90 Degree C (194 Degree F) of Absorptive Electrochromic Coatings on Sealed Insulating Glass Units

E2241-06 .....Test Method for Assessing the Current-Voltage Cycling Stability at Room Temperature of Absorptive Electrochromic Coatings on Sealed Insulating Glass Units

E2354-10 .....Assessing the Durability of Absorptive Electrochromic Coatings within Sealed Insulating Glass Units

E2355-10 .....Test Method for Measuring the Visible Light Transmission Uniformity of an Absorptive Electrochromic Coating on a Glazing Surface

F1233-08(2019) .....Standard Test Method for Security Glazing Materials and Systems

F1642/F1642M-17 .....Test Method for Glazing and Glazing Systems Subject to Airblast Loadings

F. Code of Federal Regulations (CFR):

16 CFR 1201-10 .....Safety Standard for Architectural Glazing Materials

G. Glass Association of North America (GANA):

2010 Edition .....GANA Glazing Manual

2008 Edition .....GANA Sealant Manual

2009 Edition .....GANA Laminated Glazing Reference Manual

2010 Edition .....GANA Protective Glazing Reference Manual

H. International Code Council (ICC):

IBC .....International Building Code

I. Insulating Glass Certification Council (IGCC)

J. Insulating Glass Manufacturer Alliance (IGMA):

TB-3001-13 .....Guidelines for Sloped Glazing

TM-3000 .....North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use

K. Intertek Testing Services – Warnock Hersey (ITS-WHI)

L. National Fire Protection Association (NFPA):

80-16 .....Fire Doors and Windows

252-12 .....Fire Tests of Door Assemblies

257-12 .....Standard on Fire Test for Window and Glass Block Assemblies

M. National Fenestration Rating Council (NFRC)

N. Safety Glazing Certification Council (SGCC) 2012:

Certified Products Directory (Issued Semi-Annually).

O. Underwriters Laboratories, Inc. (UL):

9-08(R2009) .....Fire Tests of Window Assemblies

263-14 .....Fire Tests of Building Construction and Materials

P. Department of Veterans Affairs:

Q. Physical Security Design Manual for VA Mission Critical Protected Facilities January 2015

R. Architectural Design Manual for VA Facilities (VASDM)

S. Environmental Protection Agency (EPA):

40 CFR 59(2014) .....National Volatile Organic Compound Emission Standards for Consumer and Commercial Products

PART 2 - PRODUCT

2.1 GLASS

A. Provide minimum thickness stated and as additionally required to meet performance requirements.

1. Provide minimum 6 mm (1/4 inch) thick glass units unless otherwise indicated.

B. Obtain glass units from single source from single manufacturer for each glass type.

C. Clear Glass:

1. ASTM C1036, Type I, Class 1, Quality q3.

D. Ultra-clear-Low-Iron Float Glass:

1. ASTM C1036, Type I, Class 1, Quality q3 and with visible light transmission of not less than 90 percent.

2.2 HEAT-TREATED GLASS

A. Roller Wave Limits for Heat-Treated Glass: Orient all roller wave distortion parallel to bottom surface of glazing, and provide units complying with the following limitations:
   1. Measurement Parallel to Line: Maximum peak to valley 0.203 mm (0.008 inch).
   2. Measurement Perpendicular to Line: Maximum 0.0254 mm (0.001 inch).
   3. Bow/Warp: Maximum 50 percent of bow and warp allowed by ASTM C1048.

B. Clear Heat Strengthened Glass:
   1. ASTM C1048, Kind HS, Condition A, Type I, Class 1, Quality q3.

C. Clear Tempered Glass:
   1. ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality q3.

2.3 COATED GLASS

A. Reflective-Coated Low-E Coated Tempered Glass:
   1. ASTM C1376 and ASTM C1048, Kind FT, Condition C, Type I, Class 1, Quality q3 with reflective metallic coating.

2.4 ELECTROCHROMIC COATED GLASS (NOT USED)

2.5 PLASTIC GLAZING (NOT USED)

2.6 LAMINATED GLASS

A. SECURITY GLAZING ASSEMBLY Blast Resistance: Provide exterior glazing units that meet the specified blast pressures and impulses providing protection based upon the specified hazard rating.

D. Laminated Glass Blast Glazing Units: Fabricate from multiple lites of glass with polyvinyl butyral, ionomeric polymer, or cast-in-place and cured-transparent resin interlayers between the layers of glazing.

2.7 INSULATING GLASS UNITS (NOT USED)

2.8 FIRE RESISTANCE GLAZING

A. Fire-Resistance-Rated Glazing: Glazing units tested for use in fire wall assemblies, UL, ITS-WHI or equivalent listed and labeled by testing agency in accordance with IBC for fire-resistance ratings of wall assemblies as indicated on construction documents, based upon testing according to NFPA 251 and ASTM E119 or UL 263.
   1. Labeling: Permanently label fire-resistance-rated glazing units in accordance with IBC.
   2. Basis of Design.

a. Manufacturer: Safti First. 100 N Hill Drive, Suite 12, Brisbane, CA 94005; Telephone 888.653.3333 (www.safti.com)

b. Material: SuperLight II-xl 90 minute fire resistive glazing with hose stream.

2.9 SWITCHABLE PRIVACY GLASS (NOT USED)

2.10 INSULATING PLASTIC SHEETS (NOT USED)

2.11 GLAZING ACCESSORIES

A. As required to supplement the accessories provided with the items to be glazed and to provide a complete installation. Ferrous metal accessories exposed in the finished work are to have a finish that will not corrode or stain while in service. Fire rated glazing to be installed with glazing accessories in accordance with the manufacturer’s installation instructions.

B. Setting Blocks: ASTM C864:

1. Silicone type.
2. Channel shape; having 6 mm (1/4 inch) internal depth.
3. Shore A hardness of 80 to 90 Durometer.
4. Block lengths: 50 mm (2 inches) except 100 to 150 mm (4 to 6 inches) for insulating glass.
5. Block width: Approximately 1.6 mm (1/16 inch) less than the full width of the rabbet.
6. Block thickness: Minimum 4.8 mm (3/16 inch). Thickness sized for rabbet depth as required.

C. Spacers: ASTM C864:

1. Channel shape having a 6 mm (1/4 inch) internal depth.
2. Flanges not less 2.4 mm (3/32 inch) thick and web 3 mm (1/8 inch) thick.
3. Lengths: 25 to 76 mm (1 to 3 inches).
4. Shore A hardness of 40 to 50 Durometer.

D. Glazing Tapes:

1. Semi-solid polymeric based closed cell material exhibiting pressure-sensitive adhesion and withstanding exposure to sunlight, moisture, heat, cold, and aging.
2. Shape, size and degree of softness and strength suitable for use in glazing application to prevent water infiltration.
3. Complying with AAMA 800 for the following types:

a. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
b. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

E. Spring Steel Spacer: Galvanized steel wire or strip designed to position glazing in channel or rabbeted sash with stops.

F. Glazing Sealants: ASTM C920, silicone neutral cure:
1. Type S.
2. Class 25 or 50 as recommended by manufacturer for application.
3. Grade NS.
4. Shore A hardness of 25 to 30 Durometer.

G. Structural Sealant: ASTM C920, silicone acetoxy cure:
1. Type S.
2. Class 25.
3. Grade NS.
4. Shore a hardness of 25 to 30 Durometer.

H. Color:
1. Color of glazing compounds, gaskets, and sealants used for aluminum color frames to match color of the finished aluminum and be nonstaining.
2. Color of other glazing compounds, gaskets, and sealants which will be exposed in the finished work and unpainted are to be black, gray, or neutral color.

I. Smoke Removal Unit Targets: Adhesive targets affixed to glass to identify glass units intended for removal for smoke control. Comply with requirements of local Fire Department.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions:
1. Examine openings for glass and glazing units; determine they are proper size; plumb; square; and level before installation is started.
2. Verify that glazing openings conform with details, dimensions and tolerances indicated on manufacturer is approved shop drawings.

B. Review for conditions which may adversely affect glass and glazing unit installation, prior to commencement of installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

C. Verify that wash down of adjacent masonry is completed prior to erection of glass and glazing units.

3.2 PREPARATION

A. For sealant glazing, prepare glazing surfaces in accordance with GANA Sealant Manual.

B. Determine glazing unit size and edge clearances by measuring the actual unit to receive the glazing.

C. Shop fabricate and cut glass with smooth, straight edges of full size required by openings to provide GANA recommended edge clearances.

D. Verify that components used are compatible.

E. Clean and dry glazing surfaces.

F. Prime surfaces scheduled to receive sealants, as determined by preconstruction sealant-substrate testing.

3.3 INSTALLATION – GENERAL

A. Install in accordance with GANA Glazing Manual, GANA Sealant Manual, IGMA TB-3001, and IGMA TM-3000 unless specified otherwise.

B. Glaze in accordance with recommendations of glazing and framing manufacturers, and as required to meet the Performance Test Requirements specified in other applicable sections of specifications.

C. Set glazing without bending, twisting, or forcing of units.

D. Do not allow glass to rest on or contact any framing member.

E. Glaze doors and operable sash, in a securely fixed or closed and locked position, until sealant, glazing compound, or putty has thoroughly set.

F. Tempered Glass: Install with roller distortions in horizontal position unless otherwise directed.

G. Transparent (One-Way Vision Glass) Mirror: Use continuous channel glazing gasket.

H. Laminated Glass:

1. Tape edges to seal interlayer and protect from glazing sealants.
2. Do not use putty or glazing compounds.

I. Blast Resisting Material:

1. Glaze as recommended by manufacturer, using glazing material which will permit expansion and contraction of the blast resistive material in the frame.
2. The polycarbonate surface is not to be cleaned by scraping, razor blade, squeegee, or use of highly alkaline cleaner.

3. At no time is polycarbonate material be exposed to chemical solvents (benzene, gasoline, acetone, paint thinners) or aromatic hydrocarbons (toluene or xylene), nor should any of these solvents or fumes by used or present in confined area such as a security guard booth.
4. Due care is to be exercised (paint formula, ventilation, protection of polycarbonate) when painting becomes necessary to interiors of rooms of hardline glazed units; exposure to chemical solvents could result in irreparable damage to security glazings (delaminations, distortions, cracks, severe stress crazing, air bubbles, etc.).

3.4 INSTALLATION - WET METHOD (SEALANT AND SEALANT)

A. Place setting blocks at 1/4 points and install glazing pane or unit.
B. Install removable stops with glazing centered in space by inserting spacer shims both sides at 600 mm (24 inch) intervals, 6 mm (1/4 inch) below sight line.
C. Fill gaps between glazing and stops with sealant to depth of bite on glazing, but not more than 9 mm (3/8 inch) below sight line to ensure full contact with glazing and continue the air and vapor seal.
D. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.5 INSTALLATION - INTERIOR WET/DRY METHOD (TAPE AND SEALANT)

A. Cut glazing tape to length and install against permanent stops, projecting 1.6 mm (1/16 inch) above sight line.
B. Place setting blocks at 1/4 points with edge block no more than 150 mm (6 inches) from corners.
C. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
D. Install removable stops, spacer shims inserted between glazing and applied stops at 600 mm (24 inch) intervals, 6 mm (1/4 inch) below sight line.
E. Fill gaps between pane and applied stop with sealant to depth equal to bite on glazing, to uniform and level line. Sealant type is to be compatible with glazing tape.
F. Trim protruding tape edge.

3.6 INSTALLATION - INTERIOR WET METHOD (COMPOUND AND COMPOUND)(NOT USED)

3.7 REPLACEMENT AND CLEANING

A. Clean new glass surfaces removing temporary labels, paint spots, and defacement after approval by COR.

B. Replace cracked, broken, and imperfect glass, or glass which has been installed improperly.

C. Leave glass, putty, and other setting material in clean, whole, and acceptable condition.

3.8 PROTECTION

A. Protect finished surfaces from damage during erection, and after completion of work. Strippable plastic coatings on colored anodized finish are not acceptable.

3.9 MONOLITHIC GLASS SCHEDULE

A. Glass Type MG-1 Clear fully tempered float glass.

1. Unit Thickness: 6 mm (0.23 inch).
2. Safety glazing label required.

3.10 LAMINATED GLASS SCHEDULE

A. Glass per section 2.6 LAMINATED GLASS.

3.11 INSULATING LAMINATED GLASS SCHEDULE (FORCE PROTECTION AND PHYSICAL SAFETY)

A. Glass per section 2.6 LAMINATED GLASS.

3.12 ELECTROCHROMIC LAMINATED INSULATING GLASS SCHEDULE (NOT USED)

3.13 FIRE-RESISTANCE GLAZING SCHEDULE

A. Glass Type FR-1: Fire-resistance-rated laminated glass with intumescent interlayers.

1. Thickness: 1 1/2".
2. Rating: 90 minute.
3. Application: Fire-resistance-rated door assemblies.

3.14 SECURITY GLAZING SCHEDULE (NOT USED)

- - - E N D - - -

SECTION 09 06 00
SCHEDULE FOR FINISHES

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section contains a coordinated system in which requirements for materials specified in other sections shown are identified by abbreviated material names and finish codes in the room finish schedule or shown for other locations.

1.2 MANUFACTURERS

A. Manufacturer’s trade names and numbers used herein are only to identify colors, finishes, textures and patterns. Products of other manufacturer’s equivalent to colors, finishes, textures and patterns of manufacturers listed that meet requirements of technical specifications will be acceptable upon approval in writing by contracting officer for finish requirements.

1.3 SUBMITALS

A. Submit in accordance with SECTION 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES—provide quadruplicate samples for color approval of materials and finishes specified in this section.

1.4 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in text by basic designation only.
B. MASTER PAINTING INSTITUTE: (MPI)
2001.....Architectural Painting Specification Manual

PART 2 - PRODUCTS

2.1 DIVISION 03 – CONCRETE

A. SECTION 03 30 53, (SHORT FORM) CAST-IN-PLACE CONCRETE

Surface	Finish Description
Sealed Concrete	NA
Sidewalks	Broom Finish

2.2 DIVISON 04 – MASONRY

A. Section 04 05 13, MASONRY MORTARING and Section 04 05 16, MASONRY GROUTING

Finish Code	Manufacturer	Mfg. Color Name
NA	NA	Gray

B. Section 04 20 00, UNIT MASONRY

1. FACE BRICK (FB)

Finish Code	Size	Pattern	Manufacturer	Mfg. Color Name/No.
FACE BRICK	Modular	AS SHOWN ON DRAWINGS	Sioux City Bick	COLONIAL BLEND 70% GRANITE RED; 30% PLUMB

3. CONCRETE MASONRY UNIT (CMU)				
Type	Size	Pattern	Finish	Mfg. Color Name/No.
CMU Standard	Nominal	Running Bond	Smooth	Gray

E. 04 72 00, CAST STONE MASONRY

Material	Size	Color, Texture, Finish, Grain	Pattern	Stone Source
CAST STONE	AS SHOWN ON DRAWINGS	Greystone	Match Existing	NA

2.3 DIVISION 05 – METALS

A. SECTION 05 12 00, STRUCTURAL STEEL FRAMING

Component	Finish	Color
Beams and Columns	Flat	Primed Gray

B. SECTION 05 21 00, STEEL JOIST FRAMING

Finish	Color
NA	Primed Gray

C. SECTION 05 31 00, STEEL DECKING, SECTION 05 36 00, COMPOSITE METAL DECKING

Finish	Color
Smooth	Primed Gray

E. SECTION 05 50 00, METAL FABRICATIONS

Item	Finish
Loose Lintels	P-5
Steel Ladders	P-5
Steel Ladder Rungs	P-5
Steel Pipe Railings and Gates (not on Steel Stairs)	P-5

G. SECTION 07 95 13, EXPANSION JOINT COVER ASSEMBLIES

	Material	Finish	Manufacturer	Mfg. Color Name/No.
Floor Component Cover Plate Frame Casket or Sealant (interior only)	Alum.	NA	Inpro 808 series	Clear
Wall Component Cover Plate Frame Casket or Sealant (interior only)	Alum.	NA	Inpro 801 series	Clear
Exterior Wall Cover Plate Frame Thermoplastic Joint	Silicone coated	NA	Emseal	Quarry Red

2.4 DIVISION 06 WOOD, PLASTICS, AND COMPOSITES

21. GLASS FIBER REINFORCE PLASTIC PANELS			
Location	Finish	Manufacturer	Mfg. Color Name/No.
House Keeping Closet	Smooth	Marlite	White

2.5 DIVISION 07 - THERMAL AND MOISTURE PROTECTION

A. SECTION 07 40 00 SIDING PANELS

Type	Shape	Ext. Finish	Int. Finish	Manufacturer	Mfg. Color Name/No.
MP-1	IW-15A	Smooth	N/a	Centria	156 Colonial Red

B. SECTION 07 54 23, THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

Color	Manufacturer	Mfg. Color Name/No.
White	Carlisle	White

C. SECTION 07 60 00, FLASHING AND SHEET METAL

Item	Material	Finish
Copings	Prefinished Galvanized Steel	Dark Bronze
Roof Insulated Expansion Joint Covers	Vinyl sheet	White

D.SECTION 07 71 00, ROOF SPECIALITIES and 07 72 00, ROOF ACCESSORIES

Item	Material	Finish	Manufacturer	Manufacturer/Color Name/Number.
Equipment Support	Steel	Paint	NA	NA

E. SECTION 07 92 00, JOINT SEALANTS

Location	Color	Manufacturer	Manufacturer Color
Masonry Expansion Joints	TBD	TBD	TBD
CMU Control Joints	Gray	TBD	Gray
Precast Concrete Panels	Color Match Continental Cast Stone #1101 Greystone	TBD	Color Match Continental Cast Stone #1101 Greystone
New to Existing Walls	TBD	TBD	TBD
Masonry Sealed Joints	TBD	TBD	TBD
Stone Sealed Joints	Color Match Continental Cast Stone #1101 Greystone	TBD	Color Match Continental Cast Stone #1101 Greystone

F. SECTION 07 95 13, EXPANSION JOINT COVER ASSEMBLIES

Location	Color	Manufacturer	Manufacturer Color
Building Expansion Joints	Quarry Red	Sika Emseal	Quarry Red
Interior Aluminum Joint Covers	Clear	Inpro	Clear

2.6 DIVISION 08 - OPENINGS

A. SECTION 08 11 13, HOLLOW METAL DOORS AND FRAMES

1. Paint both sides of door and frames same color including ferrous metal louvers, and hardware attached to door

Component	Color of Paint Type and Gloss
Interior Doors and Frames	PT-4
Exterior Doors and Frames	PT-5

B. SECTION 08 21 00, IMPACT RESISTANT DOORS

Manufacturer	Finish/Color
Acrovyn	Fossil Teak #1352 C. SECTION 08 22 00, FRP DOORS AND FRAMES

C. SECTION 08 22 00, FRP DOORS AND FRAMES

Manufacturer	Finish/Color
Corrim	Polyurethane Flat, Smooth Facesheet - AG-71275 Medium Gray

D. SECTION 08 31 13, ACCESS DOORS AND FRAMES

Material	Finish/Color
Stainless steel	Match Adjacent finish

E. SECTION 08 41 13, ALUMINUM FRAMED STOREFRONTS

Material	Finish	Manufacturer	Manufacturer Color Name/No.
Aluminum	Anodized	TBD	Clear

F. SECTION 08 56 53, BLAST RESISTANT WINDOWS

Material	Finish	Manufacturer	Manufacturer Color Name/No.
Aluminum	Anodized	TBD	Black

F. SECTION 08 71 00, BUILDERS HARDWARE

Item	Material	Finish
Hinges	Steel	US32D
Door Closers	Steel	Spray Alum
Floor Closers	Steel	US26D
Floor Pivot Sets	Steel	US26D
Closer/ Holder	Steel	Spray Alum
Floor Stops	Steel	US26D
Door Holders	Steel	US26D
Lock/ Latches	Steel	US26D

Key Cabinet	Steel	US26D
Armor Plates	Metal	US26D
Kick Mop Plates	Metal	US26D
Door Edging	Steel	US26D
Exit Device	Steel	US26D
Flush Bolts	Steel	US26D
Door Pulls	Steel	US26D
Push Plates	Steel	US26D
Combination Push Pull Plate	Steel	US26D
Coordinators	Steel	US26D
Light Proof Seals	Steel	US26D
Weather Strip	Steel	Black
Threshold	Steel	US26D

G. SECTION 08 80 00, GLAZING

Glazing Type	Manufacturer	Mfg. Color Name/No.
MG-1	NA	Clear
FR-1	Basis of Design: SaftiFirst	Clear

2.7 DIVISION 09 - FINISHES

A. SECTION 09 30 13, CERAMIC/PORCELAIN TILING

Finish Code	Manufacturer	Mfg. Color Name/Product/Pattern	Size	Grout Color
PT-1	Crossville	Shades 2.0 – Clay SHD45.12424UPS	24″x24″	GT-1
PT-2	Daltile	Fabrique - Crème Linen P686	12″x24″	GT-2
PT-3	Crossville	Shades 2.0 – Clay SHD45.10202UMOS	2″ x 2″ Mosaic	GT-1
PT-4	Crossville	Shades 2.0 Mosaic Warm Grays SHD4/.10103SMOS	1″ x 3″ Mosaic	GT-2

B. SECTION 09 30 13, PORCELAIN TILE GROUT

Finish Code	Manufacturer/Product	Mfg. Color Name/No.
GT-1	Bostik/TrueColor RapidCure	Clay #H197
GT-2	Bostik/TrueColor RapidCure	Mobe Pearl #H145

C. SECTION 09 30 00, SPECIALTY MOLDINGS AND TRIMS

Finish Code	Manufacturer	Type	Finish	Size
TR-1	Schluter Systems	Rondec	Satin Anodized	TBD by Installer
PR-1	Schluter Systems	Dilex AHK	Satin Anodized	TBD by Installer
TS-1	Schluter Systems	Reno U	Satin Anodized	TBD by Installer
TS-2	Powerhold	LVT Joiner	EA	TBD by Installer
TS-3	Any	Terrazzo Type Divider	Mill	TBD by Installer
TR-2	Powerhold	Cap Strip	EA	TBD by Installer

C. SECTION 09 51 00, ACOUSTICAL CEILINGS

Finish Code	Component	Color Pattern	Manufacturer	Mfg Name/No.
ACT-1	Lay-in	White/2’x2’	Armstrong	Cortega – Angled Tegular 15/16
ACT-2	Lay-in	White/2’x2’	Armstrong	Clean Room VL

D. SECTION 09 65 16, RUBBER FLOORING, HEAT WELDED SEAMS (WSF)

Finish Code	Product	Manufacturer	Mfg. Color Name/No.
RF (Rubber Flooring)	Environcare 3.0 mm	Nora Systems Inc.	Potluck 7053
HWR-1 (Heat Welding Rod)	Environcare	Nora Systems Inc.	6510*7053

E. SECTION 09 65 16, [RESILIENT SHEET FLOORING], (RSF)

Finish Code	Manufacturer	Style	Mfg. Color Name/No.
RSF-1	Shannon Specialty Flooring	Teknoflor Forestscapes	Abcoa #52210

F. SECTION 09 65 13, RESILIENT BASE STAIR TREADS AND ACCESSORIES

Finish Code	Item	Height or Size	Manufacturer	Product No./Color/Style
RB-1	Rubber Base (RB)	4″	Johnsonite	700 Series/32 Pebble/Coved
TS-1	Rubber Floor Transitions	-	Johnsonite	Rolling Traffic Transitions/32 Pebble

G. SECTION 09 65 36.413, STATIC DISSIPATIVE RESILIENT TILE FLOORING

Finish Code	Item	Height or Size	Manufacturer	Product No./Color/Style
SD-1	Static Dissipative Vinyl Tile	12″ x 12″	Flexco	Delane ESD Vinyl Tile in Warm Gray 65

H. SECTION 09 67 26, RESINOUS FLOORING (RES)

Finish Code	Manufacturer	Style	Mfg. Color Name/No.
RES-1	Master Builders Solutions	Mastertop1851SRS CF	¼″ Limestone flake

I. SECTION 09 67 23.30, RESINOUS (EPOXY BASE) HIGH PERFORMANCE FLOORING

Finish Code	Manufacturer	Style	Mfg. Color Name/No.

EPY-1	Sherwin Williams	Armor Seal 8100	TBD

J. SECTION 09 67 00, ARCHITECTURAL SOLID COATINGS (RES-W)

Finish Code	Manufacturer	Style	Mfg. Color Name/No.
RES-W1	Dudick	Steri-Coat P	#101 Medium Gray

K. SECTION 09 91 00, PAINT AND COATINGS

1. MPI Gloss and Sheen Standards

		Gloss @60	Sheen @85
Gloss Level 1	a traditional matte finish-flat	max 5 units, and	max 10 units
Gloss Level 2	a high side sheen flat-“a velvet-like” finish	max 10 units, and	10-35 units
Gloss Level 3	a traditional “egg-shell like” finish	10-25 units, and	10-35 units
Gloss Level 4	a “satin-like” finish	20-35 units, and	min. 35 units
Gloss Level 5	a traditional semi-gloss	35-70 units	
Gloss Level 6	a traditional gloss	70-85 units	
Gloss Level 7	a high gloss	more than 85 units	

Paint code	Manufacturer	Product	Gloss	Mfg. Color Name/No.
P-1	Diamond Vogel	Zero Plus 0 Interior Latex	Level 3	Thistle Gray/#0197
P-2	Diamond Vogel	Zero Plus 0 Interior Latex	Level 3	Match - Extra White/SW7006
P-3	Diamond Vogel	Zero Plus 0 Interior Latex	Level 3	Drifting Sand/#0218
P-4	Sherwin Williams	Pro Industrial Acrylic SemiGlos	Level 5	Drifting Sand/#021(Interior Hollow Metal Doors and Frames)
P-5	Diamond Vogel	Diamond Vogel CoteAll 340	Level 6	Bronze AZ-8437 (exterior Hollow Metal Doors, Frames, Ralings, and other metal work)
P-6	Diamond Vogel	Diamond Vogel CoteAll 340	Level 6	Cotton White (exposed ceilings - underside of metal decking)

FP-1	Flame Control/Sherwin Williams	Fire Retardant Paint System – 1 Undercoat Flame Control 20-20 Intumescent paint, 1 Topcoat Flame Control 400	-	-

B. DIVISION 10 - SPECIALTIES

A. SECTION 10 21 13, TOILET PARTITIONS

Item	Material	Manufacturer	Mfg. Color Name/No.
Hiny Hiders	HDPE	Scranton Products	Charcoal

B. SECTION 10 26 00, WALL GUARDS AND DOOR PROTECTION

Item	Manufacturer	Style	Mfg. Color Name/No.
Corner Guard (CG-1)	Pawling	CG-51-8 Adhesive Applied	Stainless Steel
Handrail (HR-1)	Inpro	800 Handrail	Slate 0237
Crash Rail (CR-1)	Inpro	Nu Tree Heavy Duty Wall Guard - NT-140	Weather Wood
Wall Protection (WP-1)	Inpro	Palladium Rigid Vinyl Sheet	Slate 0237
Wall Protection (WP-2)	Protek Systems	WCWH-80 Seamless Vinyl Wall Covering	White

C. SECTION 10 44 13, FIRE EXTNGUISHER CABINETS

Component	Material	Finish
Door & Frame	Steel	Manufacturers Standard White

D. SECTION 10 51 16, HDPE LOCKERS & LOCKER BENCHES

Item	Material	Manufacturer	Mfg. Color Name/No.
Tufftec Lockers	HDPE	Scranton Products	Charcoal
Tufftec Benches	HDPE	Scranton Products	Charcoal

C. DIVISION 12- FURNISHINGS

A. SECTION 12 24 00, WINDOW SHADES

Component	Manufacturer	Material	Mfg. Color Name/No.
Shade Cloth	Insolroll	Mesa Solar Screen Fabric	Pearl Grey
Support Hardware	Insolroll	Open Roll	Bronze

B. SECTION 12 31 00, METAL CASEWORK

Item/ Type	Style	Manufacturer	Mfg. Color Name/No.
Steel Casework	Flush Overlay	--	Stainless Steel

C. SECTION 12 32 00, WOOD CASEWORK

Item	Manufacturer	Finish/Color
Casework (Laminate)	Formica	Cascara Teakwood 8909

D. SECTION 12 36 00, COUNTERTOPS AND ACCESSORIES

Type	Manufacturer/Finish/Color
Solid Surface	L HI-MACS/Milky Way 2 T009
Stainless Steel	1.5 mm thick

--- E N D---

SECTION 09 65 36.13
STATIC DISSAPATIVE RESILIENT TILE FLOORING

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
   i. Vinyl Tile Flooring
   ii. Substrate Preparation

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   i. Section 03 30 00 CAST-IN-PLACE CONCRETE for concrete substrate; slab surface tolerances

C. References (Industry Standards):
   i. ASTM International (ASTM):
      a. ASTM F1700, Standard Specification for Solid Vinyl Tile Floor Covering
      b. ASTM E648 (NFPA 253), Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
      c. ASTM E662 (NFPA 258), Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
      d. ASTM F970, Standard Test Method for Static Load Limit
      e. ASTM F970 (Modified), Test Method for Maximum Load Limit
      f. ASTM F925, Standard Test Method for Resistance to Chemicals of Resilient Flooring
      g. ASTM D2047, Standard Test Method for Static Coefficient of Friction as Measured by the James Machine
      h. ASTM F150, Standard Test Method for Electrical Resistance; 0.25 MΩ - 1 MΩ (Conductive) & 1 MΩ - 1000 MΩ (Dissipative)
      i. ANSI/ESD S7.1, Standard Test Method for Static Protective Flooring Materials
      j. ANSI/ESD S20.20, Electrostatic Discharge Control Program Standard
      k. AATCC-134, Static Generation Propensity (Conductive)
      l. AATCC-134, Static Generation Propensity (Dissipative)

1.2 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures.

B. Product Data: Submit manufacturer's technical data sheet, care & maintenance document, submittal and/or warranty for each material and accessory proposed for use.

C. Samples: Submit representative samples of each product specified for verification, in manufacturer’s standard size samples of each resilient product color, texture and patter required.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Provide resilient flooring materials manufactured in the United States of America by a firm with a minimum of 10 years’ experience with resilient flooring materials of type equivalent to those specified.

i. Manufacturer shall be capable of providing technical training and technical field service representation.

B. Installer Qualifications: Installer must be professional, licensed, insured and familiar with the resilient flooring material to be installed. Project Managers or Field Supervisors must be INSTALL (International Standards & Training Alliance) certified CFI (Certified Floorcovering Installers) Certified and/or an FCICA (The Flooring Contractors Association) CIM (Certified Installation Manager) for the requirements of the project.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.

B. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48-hours prior to installation.

1.5 PROJECT CONDITIONS

A. Install ESD Vinyl Tile after other finishing operations, including painting, have been completed.

B. Maintain temperature at service levels and/or the ambient temperature must remain steady (± 10° F) between 65° F and 85° F for at least 48-hours prior to, during and until substantial completion.

C. Maintain relative humidity at service levels, or between 40% and 65% RH.

D. Avoid conditions in which dew point causes condensation on the installation surface.

1.6 WARRANTY

A. Provide manufacturer's standard limited commercial warranty to cover manufacturing defects.

PART 2 - PRODUCTS

2.1 PRODUCTS

A. Basis of Design: Flexco Delane ESD VINYL TILE FLOORING

1. ESD Vinyl Tile Dimensions 12" x 12" x 1/8"
2. ESD Vinyl Tile Finish: Smooth
3. Static Dissipative Vinyl Tile (1×10^6 - 1×10^9)]
4. ASTM F1700, Solid Vinyl Tile Floor Covering: Class I, Type A
5. ASTM E648 (NFPA 253), Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source: Class I, > 0.45 W/cm2
6. ASTM E662 (NFPA 258), Specific Optical Density of Smoke Generated by Solid Materials: Passes < 450
7. ASTM F970, Static Load Limit: Passes, 250 PSI
8. ASTM F970 (Modified), Maximum Load Limit: 2500 PSI
9. ASTM F925, Resistance to Chemicals: Passes (see list)
10. ASTM D2047, Static Coefficient of Friction: > 0.6
11. Federal Standard Test Method 101c: Passes, 5000 v to 0 v
12. Method 4046 (Conductive & Dissipative): In <0.01 sec.
13. ANSI/ESD S7.1: Meets Requirements
14. ANSI/ESD S20.20: Meets Requirements
15. ASTM F150, Electrical Resistance, 0.25 MΩ - 1 MΩ (Conductive): 2.5×10^4 - 1×10^6

1 MΩ - 1000 MΩ (Dissipative): 1×10^6 - 1×10^9

B. ESD APPROVED ADHESIVES

1. Manufacturers standard adhesive

2.3 ESD ACCESSORIES

1. COPPER GROUNDING STRAPS

ESD Vinyl Tile orders must include 1” x 0.004” Copper Grounding Straps.

2.4 INSTALLATION AND MAINTENANCE MATERIALS

A. Moisture Mitigation: Moisture testing is required for all ESD Vinyl Tile installations. Mitigation should be performed if results indicate high levels of moisture. Recommended Moisture Mitigation Product:

i. Refer to SECTION 09 05 16, SUBSURFACE PREPARATION FOR FLOOR FINISHES.

B. Adhesives: Adhesives should be selected based on the site conditions and use of the space being installed. Recommended Adhesive Products:

i. Follow manufacturers recommended adhesive.

C. Maintenance Materials: Proper maintenance of the installation is critical to the long term performance of the flooring products being specified. Using the appropriate chemicals to maintain the product according to the environment in which it is specified is critical. Recommend maintenance products:

a. For initial maintenance: manufacturers standard

b. For daily and routine maintenance: Manufacturers standard

DO NOT APPLY AN ‘ON-SITE’ FINISH TO ESD VINYL TILE FLOORING

PART 3 – EXECUTION

3.1 GENERAL

A. General Contractor Responsibilities:

1. Supply a safe, climate controlled building and subfloor as detailed in Flexco Technical Data Sheets.
2. Ensure substrate meets the requirements of ASTM F710, Flexco Technical Data Sheets and Excelsior Technical Data Sheets.
3. Provide a secure storage area that is maintained permanently or temporarily at normal operating temperature and humidity conditions between 65° F and 85° F and between 40% and 65% relative humidity, for at least 48-hours prior to and during the application of the flooring, so the flooring contractor can acclimate the flooring materials per manufacturer’s instructions.
4. Provide an installation area that is weather tight and maintained either permanently or temporarily at ambient service temperature and humidity. Normal operating temperature and humidity conditions are between 65° F and 85° F and between 40% and 65%

relative humidity, for at least 48-hours prior to, during and 48 hours after the application of the flooring per the manufacturer’s instructions.

5. Ensure areas with direct prolonged exposure to sunlight are protected with protective UVA/UVB restrictive coatings or films.
6. Areas of the flooring that are subject to direct sunlight through doors or windows should have them covered using blinds, curtains, cardboard or similar for the time of the installation and 48-hours after the installation to allow the adhesive to cure. Note: These areas should be installed using wet adhesives only.
7. Conduct initial maintenance prior to final usage per the Flexco Care & Maintenance Documents. Do not conduct initial maintenance until adhesive has cured per the adhesive technical data.

B. Flooring Contractor Responsibilities:

1. Provide trained installers that are professional, licensed, insured and familiar with the resilient flooring material to be installed. Ensure installers or installation teams meet one of the following requirements:
2. Have completed INSTALL (International Standards & Training Alliance) or CFI (Certified Floorcovering Installers) training programs and/or are certified by INSTALL or CFI.
3. Are being supervised by Project Managers or Field Supervisors that are INSTALL (International Standards & Training Alliance) certified, CFI (Certified Floorcovering Installers) Certified and/or an FCICA (The Flooring Contractors Association) CIM (Certified Installation Manager).
4. Follow all requirements in the appropriate Flexco and/or Excelsior Technical Data Sheets, Care & Maintenance Documents, Warranties and other technical documents or instructions.

3.2 EXAMINATION

A. General: Follow guidelines laid out in Section 01 45 00 QUALITY CONTROL.

B. Verification of Conditions: Inspect all substrates to ensure they are clean, smooth, permanently dry, flat, and structurally sound. Confirm all areas are properly sealed and acclimated per manufacturer’s requirements.

C. Verification of Products: In accordance with manufacturer's installation requirements, visually inspect material for size, color or visual defects prior to installing. Any material that is incorrect or visually defective shall not be installed.

D. Product Limitations: Do not install over LVT, cushioned vinyl, hardwood flooring, cork, rubber, or asphaltic materials. Do not install ESD Vinyl Tile in outdoor areas, residences, in or around commercial kitchens or areas that may be exposed to animal or vegetable fats and oils, grease and petroleum-based hydrocarbons. Do not install in areas that may be exposed to sharp, pointy objects, such as stiletto heels, cleats or spikes.

3.3 SUBSTRATE PREPARATION

A. General: Follow guidelines laid out in Division 01, Section 01 71 00 – Examination and preparation. All work required ensuring substrate or subfloor meets manufacturers' guidelines are the responsibility of the general contractor.

B. Preparation: Ensure substrate meets the requirements of ASTM F710 for concrete substrates and ASTM F1482 for wood substrates and/or Flexco Technical Data Sheets and Excelsior Technical Data Sheets.

1. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material or foreign matter.
2. It is recommended that all substrates have a floor flatness of FF32 and/or flatness tolerance of 1/8″ in 6′ or 3/16″ in 10′.
3. Acclimate all products to be used during the installation in the installation environment prior to installation according to the manufacturers written instructions.

C. Concrete Substrates:

1. Moisture Testing: Perform moisture testing per the manufacturer's recommendations to determine conditions, it is recommended to treat new and existing slabs a little bit different to ensure adequate conditions exist for installation.
   a. New Slabs on all grade levels: it is recommended to perform ASTM F2170 Relative Humidity testing no more than a week

prior to installation too determine the levels present and when to proceed with the installation.

b. Existing Slabs on all grade levels: in addition to ASTM F2170 testing, existing slabs that have previously had floor covering installed, must be tested to ASTM F1869 Calcium Chloride test kits to determine the MVER of the concrete.

2. Mechanically remove contamination on the substrate that may cause damage to the flooring material, this includes paint, permanent and non-permanent markers, pens, crayons, etc. Leaving these on the substrate or marking with them on the back of the material could cause bleed through and damage the flooring.
3. Fill cracks, holes, depressions and irregularities in the substrate to prevent transferring through to the surface of the resilient flooring. Use a high-quality Portland cement based product such as Excelsior installation products provided by Flexco.
4. Do not install material over expansion joints.

3.4 INSTALLATION

A. General: Follow all relevant guidelines detailed in Division 01, as well as flooring and adhesive manufacturer’s technical data sheets.

B. Resilient ESD Vinyl Tile: Install material in accordance with manufacturer’s recommendations:

1. Select the appropriate adhesive for the application and job site conditions.
2. Confirm material installation pattern and direction per design specifications or work order.
3. Dry-lay several pieces of material in order to determine ideal room layout.
4. Prior to installation, consult project electrician or electrical engineer regarding the placement of copper straps in order to synchronize copper strap placement with electrical grounding system location.
5. Prior to installing flooring materials, install copper straps directly into fresh adhesive and trowel adhesive over strap to

fully embed strap in adhesive. Copper strap must be at least 18" in length, with at least 9" embedded into adhesive.

6. Copper grounding straps must be placed every 2000 sq. ft., at least one per room.

3.5 CLEANING & MAINTENANCE

A. General: Clean up installation area and sweep, dust or wipe material to remove any dirt, dust or debris.

B. Initial Maintenance: Conduct initial maintenance per the manufacturer's recommended procedures stated in the Maintenance Documents.

C. Regular Maintenance: Conduct maintenance on regular intervals as needed. Insufficient cleaning will reduce the wear life of the flooring and alter the dissipative properties of the tiles. The amount of maintenance depends directly upon the amount of dirt and particulates the floor is subjected to.

D. ESD vinyl flooring products DO NOT require a protective wax or floor finish.

E. In areas where rolling chairs will be used, a resilient flooring chair pad must be installed over the finished floor to protect floor covering.

F. Always use untreated, new or thoroughly cleaned mops and pads when conducting daily or routine maintenance.

G. Do not use Kerosene, Gasoline, Naphtha and/or other solvents to clean vinyl tile.

3.6 CLOSEOUT ACTIVITIES

A. Protection: Protect newly installed material with construction grade paper or protective boards, such as Masonite or Ram Board, to protect material from damage by other trades. Be sure all construction debris is swept up and removed prior to the protective material being installed and does not get trapped underneath. Limit usage and foot traffic according to the adhesive's requirements. When moving appliances or heavy furniture, protect flooring and wall base from scuffing and tearing using temporary floor protection as well.

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SECTION 10 44 13
FIRE EXTINGUISHER CABINETS

PART 1 - GENERAL

1.1 DESCRIPTION

This section covers recessed fire extinguisher cabinets.

1.2 RELATED WORK

A. Field Painting: Section 09 91 00, PAINTING.

1.3 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data: Fire extinguisher cabinet including installation instruction and rough opening required.

1.4 APPLICATION PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society of Testing and Materials (ASTM):

D4802-15 .....Poly (Methyl Methacrylate) Acrylic Plastic Sheet

PART 2 - PRODUCTS

2.1 FIRE EXTINGUISHER CABINET

1. (FEC-1) Semi recessed 4” rolled trim type sized for a 10lb ABC fire extinguisher.
2. (FEC-2) Surface Mounted, sized for a 10lb ABC fire extinguisher.
3. (FEC-3) Semi recessed 4” rolled trim type sized for a 10lb CO2 fire extinguisher.

2.2 FABRICATION

A. Form body of cabinet from 0.9 mm (0.0359 inch) thick sheet steel.

B. Fabricate door and trim from 1.2 mm (0.0478 inch) thick sheet steel with all face joints fully welded and ground smooth.

1. Glaze doors with 6 mm (1/4 inch) thick ASTM D4802, clear acrylic sheet, Category B-1, Finish 1.
2. Design doors to open 180 degrees.
3. Provide continuous hinge, pull handle, and adjustable roller catch.

2.3 FINISH

A. Finish interior of cabinet body with baked-on semigloss white enamel.

B. Finish door, frame with manufacturer's standard baked-on white enamel.

PART 3 - EXECUTION

A. Install fire extinguisher cabinets in prepared openings and secure in accordance with manufacturer's instructions.

B. Install cabinet so that the extinguisher height within meets the requirements of NFPA 10 and ABA Standards.

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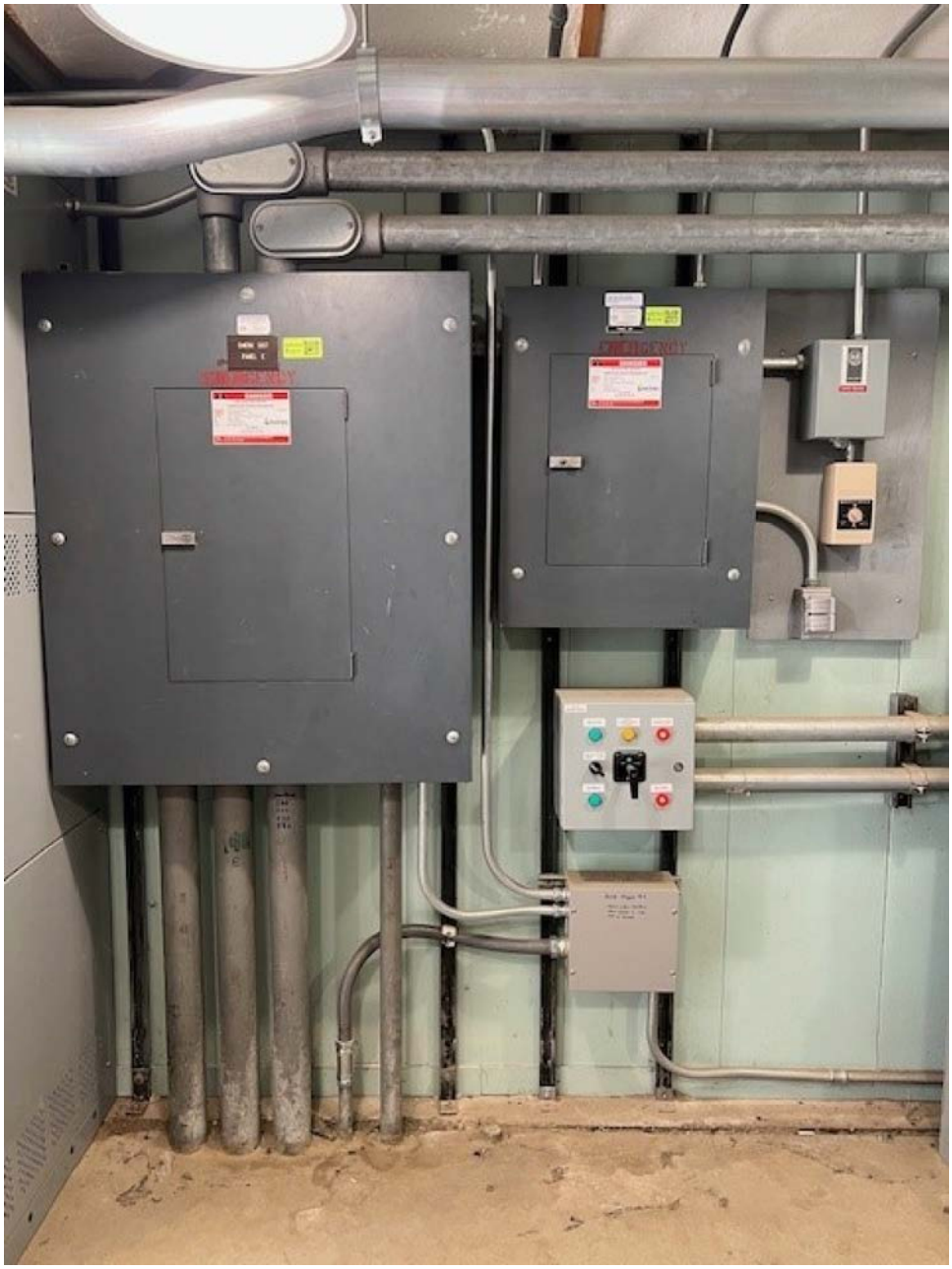
GE Spectra Series Switchboards




CAT
BUILDING 24
CRITICAL
FEEDS
PANEL E
WARNING


ON
OFF
TCR
ON
OFF