

A-dec® 541pro/541 Duo Delivery System and 545sta/545 Assistant's Instrumentation

Contents

Pre-Installation Notes and Cautions	1
Wall Construction Requirements	1
Standard Wood Wall Construction.....	1
Non-Standard Wall Construction.....	1
Other Construction Requirements	2
Floor Mounting – Concrete Floors.....	2
Floor Mounting – Non-Concrete Floors.....	2
Utility Requirements	3
Utility Specifications.....	3
Head Loss with Respect to Flow.....	4
Electrical Ratings.....	5
Shipping Weights	5
Documentation References	5
Plan Views and Dimensions	6
Utility Placement and Elevation.....	6
A-dec 541pro/545sta – Plan View.....	7
A-dec 541pro/545sta – Range of Motion.....	8
A-dec 541B/545 – Plan View.....	9
A-dec 541A/545 – Plan View.....	10
A-dec 541B/541A/545 – Range of Motion.....	11
Standard Wood Wall Construction, 2" x 6" (38 mm x 140 mm) Minimum.....	12
Standard Wood Wall Construction with Utilities, 2" x 6" (38 mm x 140 mm) Minimum.....	13
Non-Standard Wall Construction with Utilities, 7-1/2" (191 mm) Depth Minimum.....	14
Cabinet Mount Utilities.....	15
Foot Control Wall Plate.....	16
Umbilical Pass-Through.....	16



A-dec 541pro Duo Delivery System



A-dec 545sta Assistant's Instrumentation

Copyright

© 2023 A-dec, Inc. All rights reserved.

A-dec, Inc. makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. A-dec, Inc. shall not be held liable for any errors contained herein or any consequential or other damages concerning the furnishing, performance or use of this material. The information in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. A-dec, Inc. does not warrant that this document is error-free.

No part of this document may be copied, reproduced, altered, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission from A-dec, Inc.

Intellectual Property Rights

None of the trademarks, trade names, or proprietary symbols and icons in this document may be reproduced, copied, or manipulated in any manner without the express, written approval of the trademark owner.

A-dec, A-dec+, the A-dec design logo, and the trademarks listed at www.a-dec.com/legal/trademarks are A-dec trademarks or registered trademarks in the U.S. and other countries. Certain touch control symbols and icons are proprietary to A-dec, Inc.

Regulatory Information and Warranty

For required regulatory information and the A-dec warranty, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00) available in the Resource Center at www.a-dec.com.



For quick access to this document online, scan, tap, or click this QR code, which points to: a-dec.com/regulatory-guide.

Product Service

Product service is available through your local authorized A-dec dealer. For service information, or to locate an authorized dealer, contact A-dec at 1.800.547.1883 in the USA and Canada or +1.503.538.7478 worldwide, or visit www.a-dec.com.

Product Models and Versions Covered in This Document*

Models	Versions	Description
545sta	n/a	Assistant's Instrumentation
545	A	Assistant's Instrumentation
541pro	n/a	Delivery System
541	A/B	Delivery System

* Some products, versions, and options in this document may not be available in certain regions.

Pre-Installation Notes and Cautions



NOTE Job site construction should be completed before the dental equipment installation (including finished floors, ceiling, plumbing, lighting, paint, etc.).



CAUTION Local regulation may require licensed plumbers and electricians to install the utilities. All plumbing and utilities must conform to prevailing local codes.



CAUTION The manner and method for accessing the utilities within the wall is the responsibility of the design team working on the project (dental dealer, architectural services, and contractors). Utilities must be accessible without the use of tools.



CAUTION Consult a licensed professional, e.g., a structural or architectural engineer, for mounting to metal studs or masonry walls.

Wall Construction Requirements

Standard Wood Wall Construction

(With or without utilities) 2" x 6" (38 mm x 140 mm) minimum. See page 12 and page 13 for plumbing utility locations and dimensions.

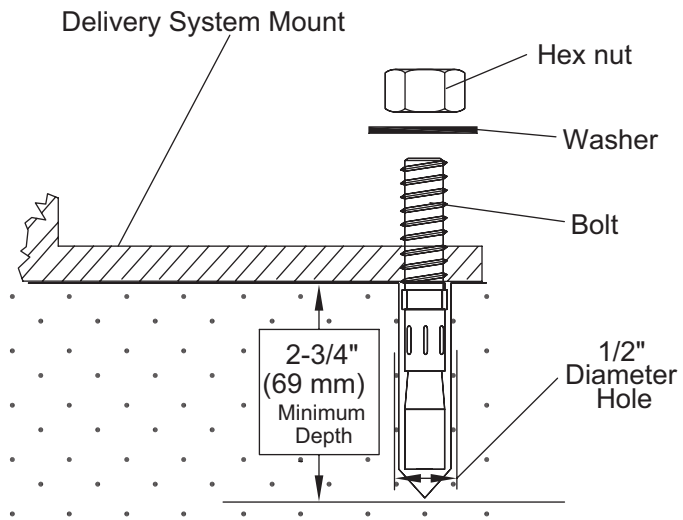
Non-Standard Wall Construction

7-1/2" (191 mm) depth minimum. See page 14 for plumbing utility locations and dimensions.

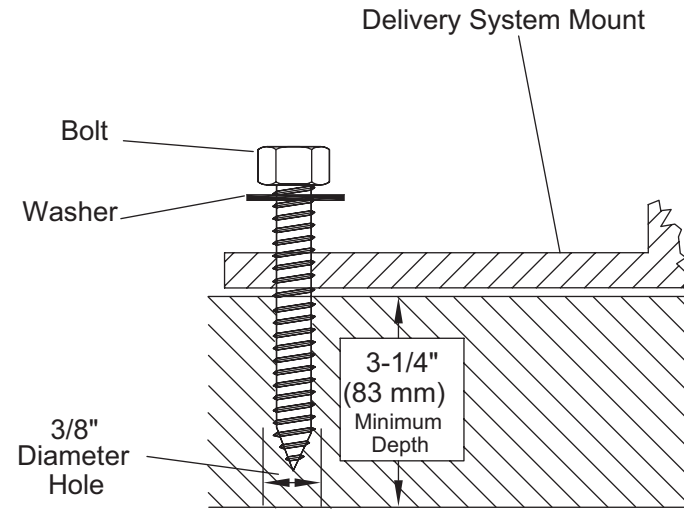
Other Construction Requirements

If the flooring material is not as thick as shown in the images below, consult your licensed contractor about adding reinforcement to the flooring.

Floor Mounting – Concrete Floors



Floor Mounting – Non-Concrete Floors



Utility Requirements

Utility Specifications

Utility	Finish	Requirements
Air	1/2" (13 mm) compression protruding 1" (25 mm)	<ul style="list-style-type: none"> Right-angle manual shutoff valve with 3/8" compression outlet supplied and installed by the contractor. 80-125 psi (550 to 860 kPa), 2.5 scfm (71 SL/min) minimum, during normal use (7.5 scfm [210 SL/min] peak intermittent flow). Flush lines prior to making connections to dental equipment.
Central vacuum	1" PVC pipe (1.315" OD) protruding 2" (50 mm)	<ul style="list-style-type: none"> Wet systems: 10 ± 2 inches of Hg (34 ± 7 kPa), 9 scfm (255 SL/min) minimum. Dry/semi-dry systems: 4.5 ± 1 inches of Hg (16 ± 3.5 kPa), 12 scfm (340 SL/min) minimum.
Electrical (optional)	1/2" (13 mm) conduit and electrical box with a hospital-grade quad power receptacle.	<ul style="list-style-type: none"> Conduit, electrical box, and power receptacle supplied and installed by the contractor (wired as per code). Electrical box should be oriented horizontally, with the top no higher than 5" (127 mm) above the finished floor. See the "Electrical Ratings" table for voltage and amperage ratings.
Nitrous Oxide (optional)	In most applications, 3/8" (10 mm) copper tubing protruding 5" (127 mm)	<ul style="list-style-type: none"> Specified by the product manufacturer.
Oxygen (optional)	In most applications, 1/2" (13 mm) copper tubing protruding 5" (127 mm).	<ul style="list-style-type: none"> Specified by the product manufacturer.

Head Loss with Respect to Flow

The following table includes information about high volume evacuator (HVE) and saliva ejector (SE) head loss with respect to flow for A-dec 545sta/545 assistant's instrumentation.

Tubing and HVE/SE	90 NL/min (3.18 SCFM)	170 NL/min (6 SCFM)	250 NL/min (8.83 SCFM)
15 mm HVE (large bore) valve with 16 mm EasyFlex Tubing and 15 mm canister connection	0.05 in-Hg (0.17 kPa)	0.23 in-Hg (0.78 kPa)	0.47 in-Hg (1.59 kPa)
11 mm HVE (standard bore) valve with 16 mm EasyFlex Tubing and 15 mm canister connection	0.06 in-Hg (0.20 kPa)	0.18 in-Hg (0.61 kPa)	0.57 in-Hg (1.93 kPa)
11 mm HVE (standard bore) valve with 13 mm EasyFlex Tubing and 15 mm canister connection	0.09 in-Hg (0.30 kPa)	0.30 in-Hg (1.02 kPa)	1.09 in-Hg (3.69 kPa)
11 mm HVE (standard bore) valve with 13 mm PVC Tubing and 15 mm canister connection	0.10 in-Hg (0.34 kPa)	0.36 in-Hg (1.22 kPa)	1.21 in-Hg (4.10 kPa)
SE (standard bore) valve with 6 mm PVC Tubing and 15 mm canister connection	1.27 in-Hg (4.30 kPa)	10.97 in-Hg (37.15 kPa)	Exceeds 12 in-Hg (40.64 kPa) at flow rates above ~200 NL/min.
SE (standard bore) valve with 10 mm EasyFlex Tubing and 15 mm canister connection	0.66 in-Hg (2.24 kPa)	4.35 in-Hg (14.73 kPa)	Exceeds 12 in-Hg (40.64 kPa) at flow rates above ~250 NL/min.

Electrical Ratings

Power	Required Electrical Supply
240 Volt	220–240 VAC, 50–60 Hz, 5 Amps minimum
120 Volt	110–120 VAC, 50–60 Hz, 10 Amps minimum



NOTE Specifications are subject to change without notice. Requirements may vary depending on your location. For more information, contact your authorized A-dec dealer.



IMPORTANT For additional electrical specifications, identification of symbols, and other regulatory requirements, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00) available in the Resource Center at www.a-dec.com.



For quick access to this document online, scan, tap, or click this QR code, which points to: a-dec.com/regulatory-guide.

Shipping Weights

Product/Box	Estimated Shipping Weight
A-dec 541pro/541 Duo Delivery System	94 lb (43 kg)
A-dec 545sta/545 Assistant's Instrumentation	89 lb (40 kg)

Documentation References

Document Title	Part Number
Template	
<i>A-dec 541/541pro and 545/545sta Delivery Systems Stand-Alone Applications</i>	85.0050.00
Installation Guides	
<i>A-dec 341pro/341ft/541pro/545sta/541/545 Delivery System Mount Installation Guide</i>	86.0003.00
<i>A-dec 541 Duo Delivery System and 545 Assistant's Instrumentation Installation Guide</i>	86.0763.00
<i>A-dec 541pro Duo Delivery System and 545sta Assistant's Instrumentation Installation Guide</i>	86.0946.00

Plan Views and Dimensions

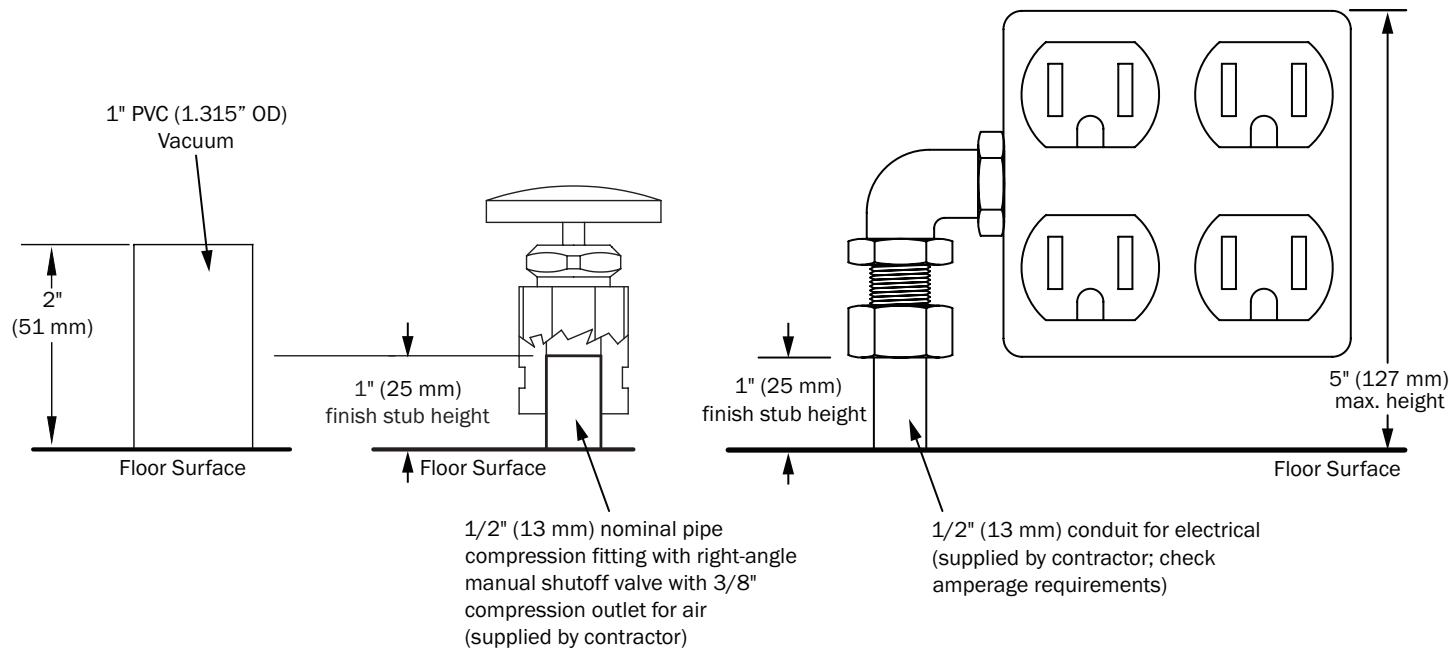


NOTE The dimensional drawings in this section are not to scale and are for reference only. For complete accuracy, use the appropriate full-sized templates.

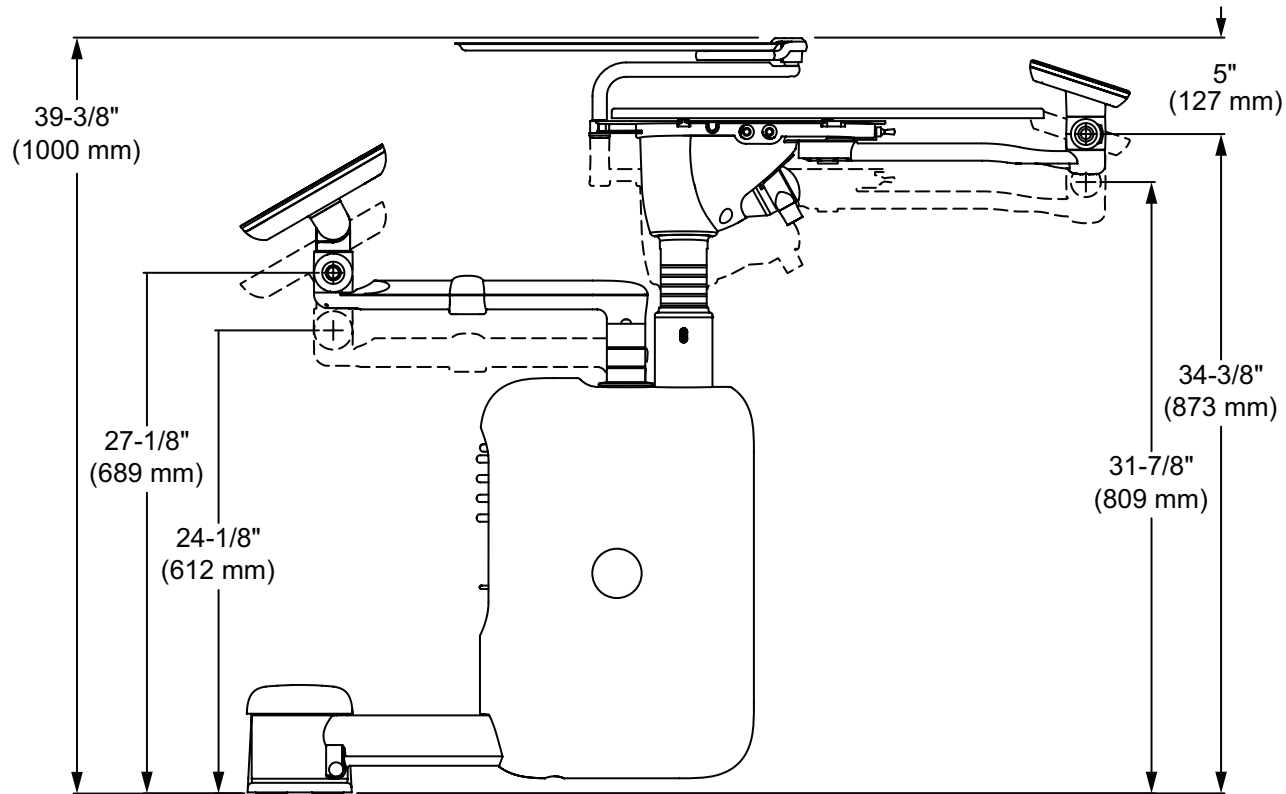
Utility Placement and Elevation



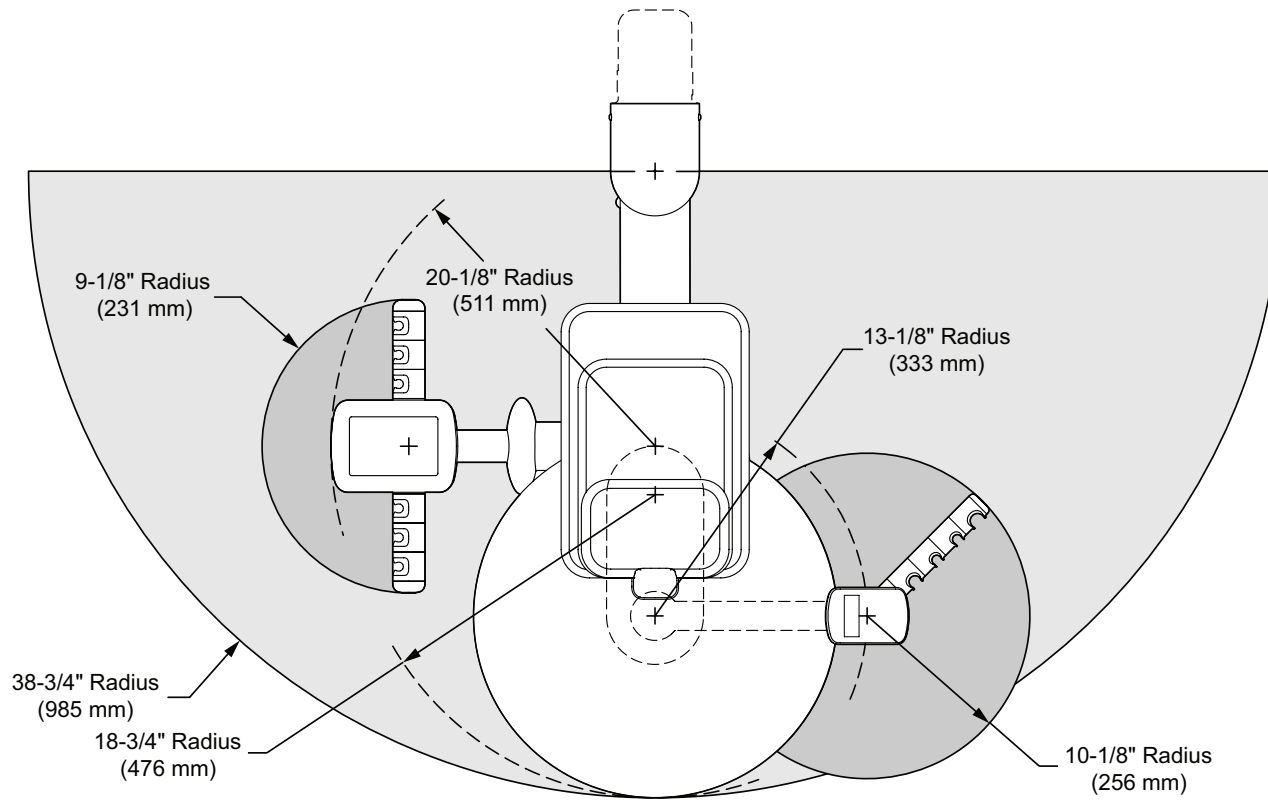
CAUTION Due to specific plumbing elevation restrictions, the height and placement of utilities in the floor box can affect the ability to use the floor box cover. Failure to provide adequate space will prevent installation and removal of the cover. See the elevations provide here and reference the appropriate full-size template, which includes the required space constraints.



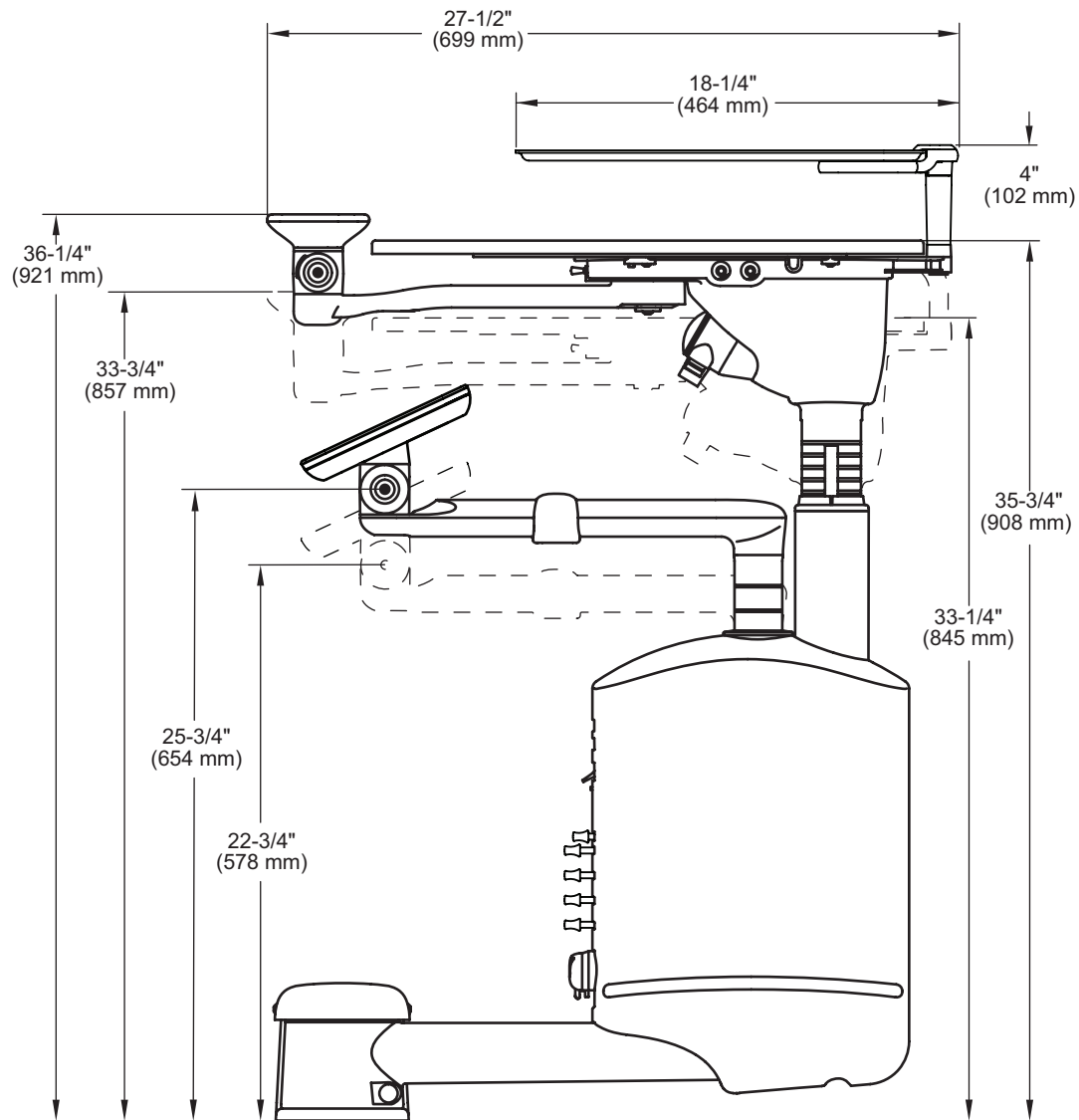
A-dec 541pro/545sta - Plan View



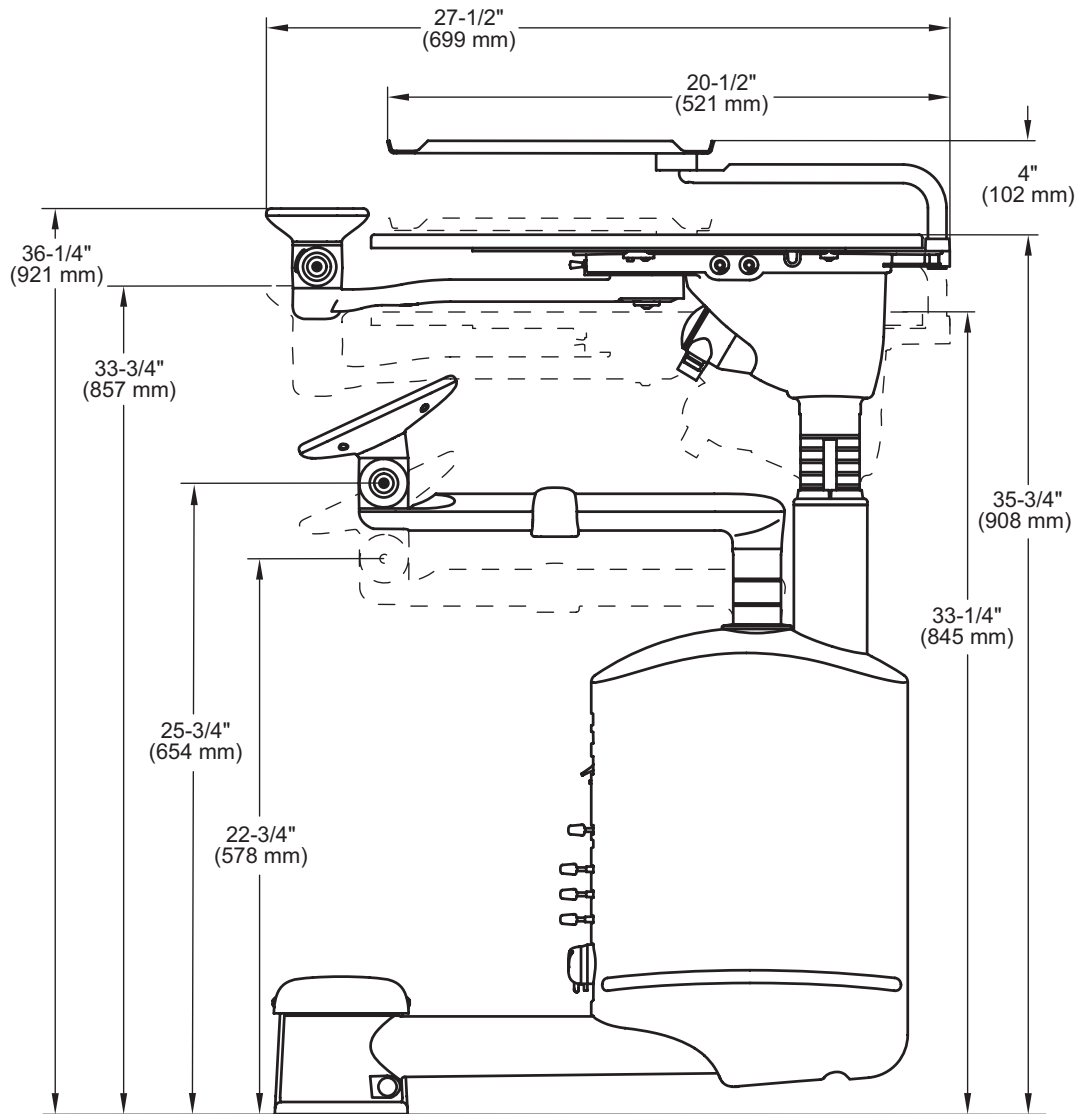
A-dec 541pro/545sta - Range of Motion



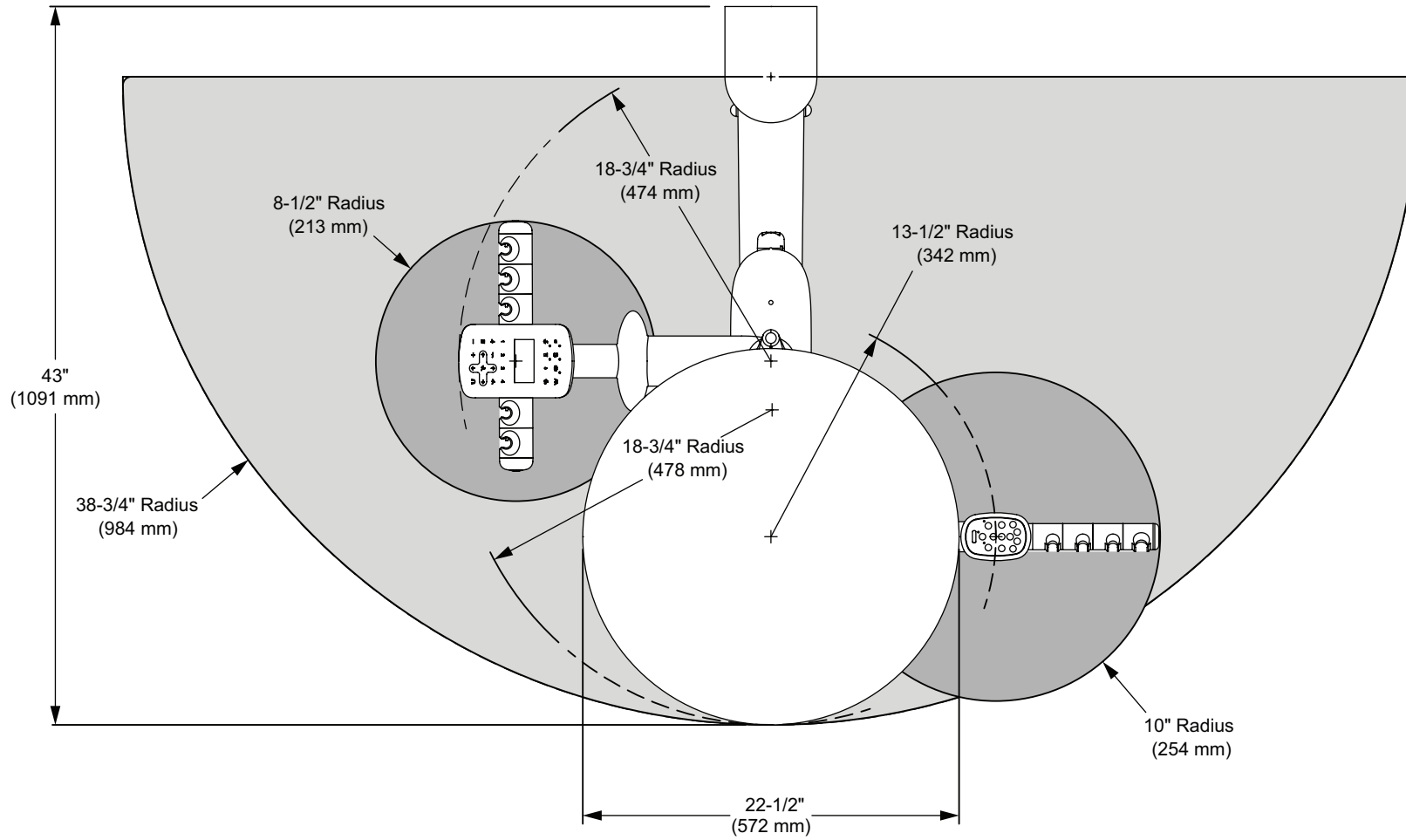
A-dec 541B/545 - Plan View



A-dec 541A/545 - Plan View

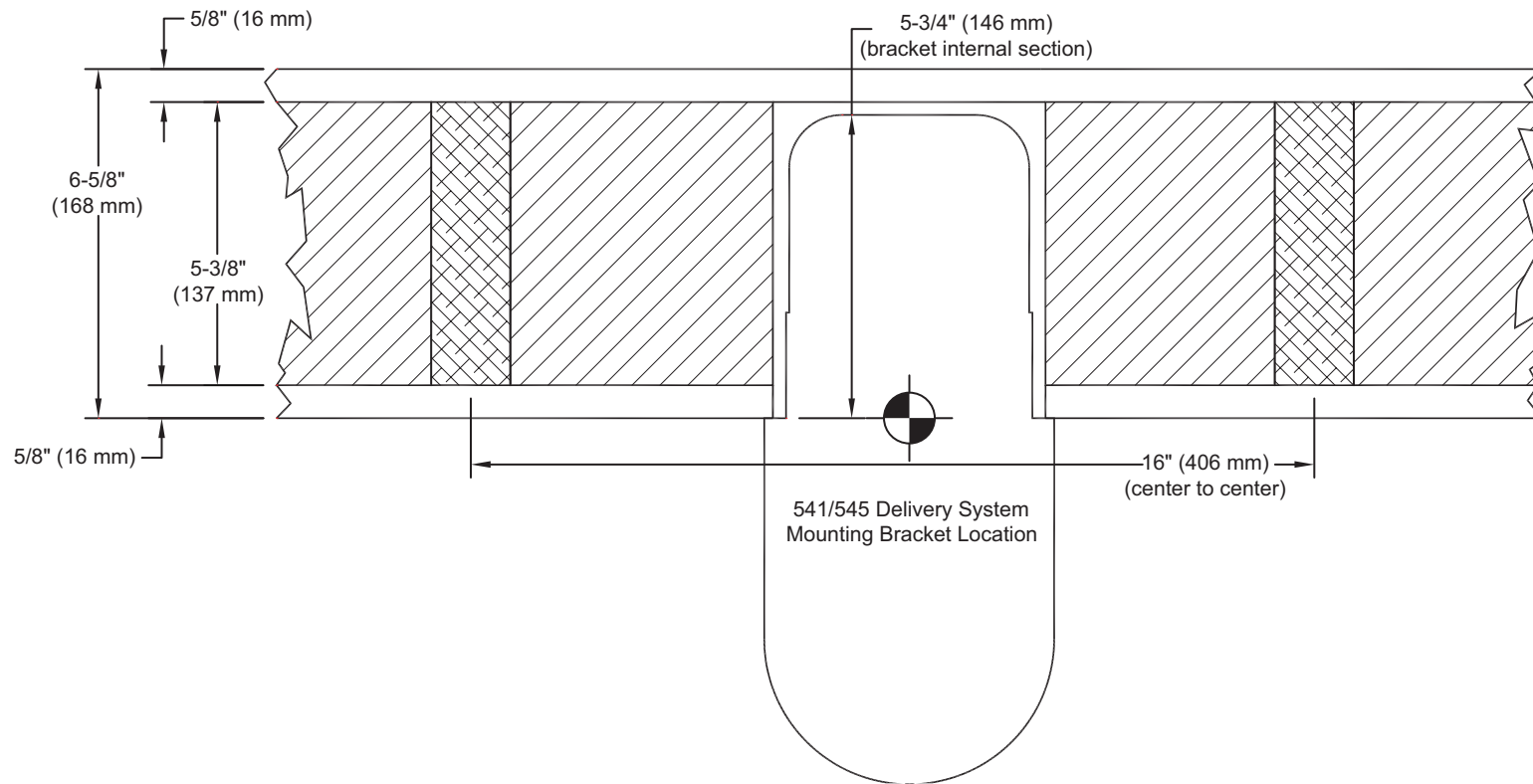


A-dec 541B/541A/545 - Range of Motion



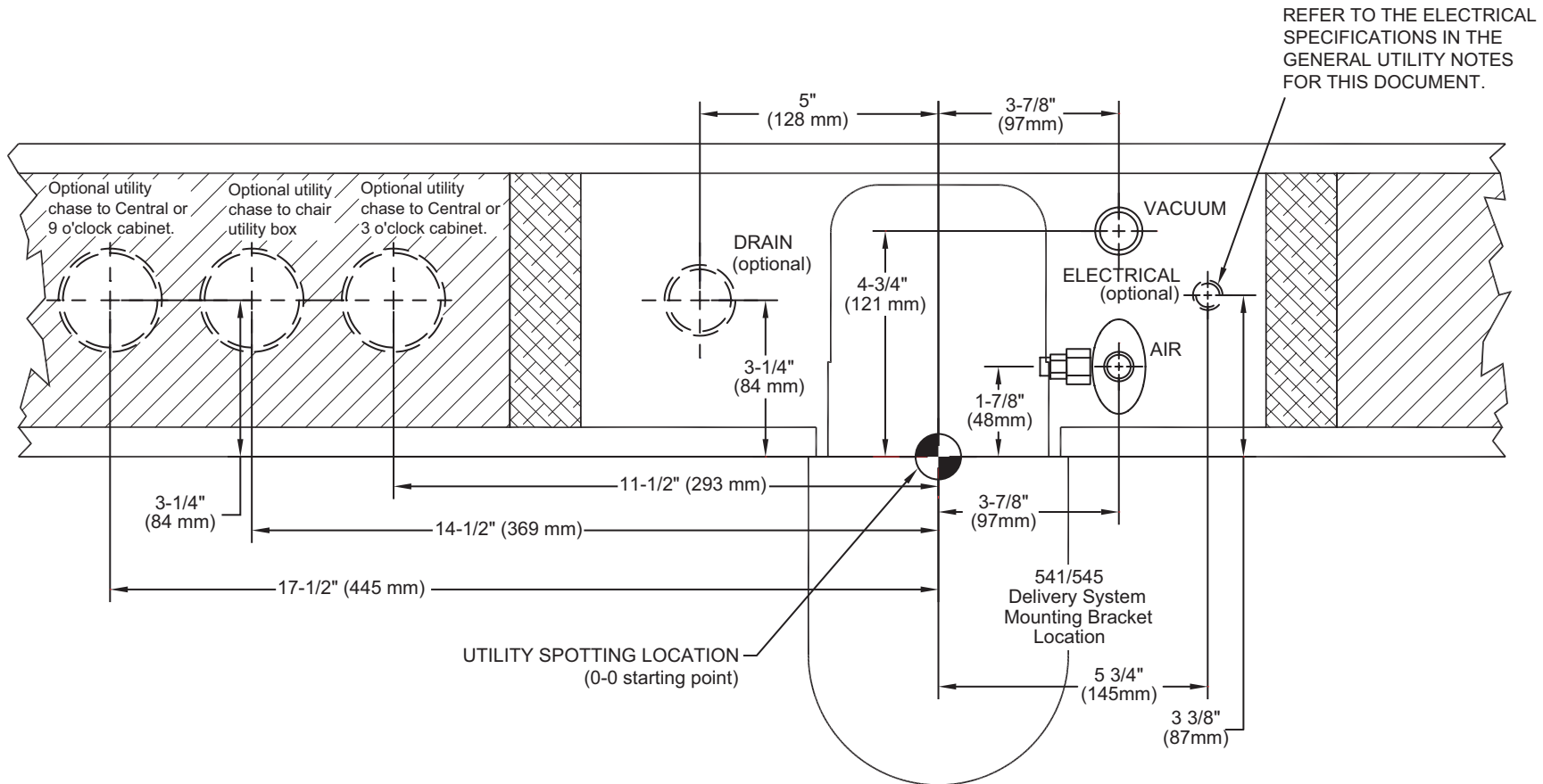
Standard Wood Wall Construction, 2" x 6" (38 mm x 140 mm) Minimum

- General wall dimensions are shown for reference only.
- The starting point for all plumbing utility dimensions are referenced by a spotting target (◐). This marks the intersection of the mounting bracket center line and the front side of the 12 o'clock wall.



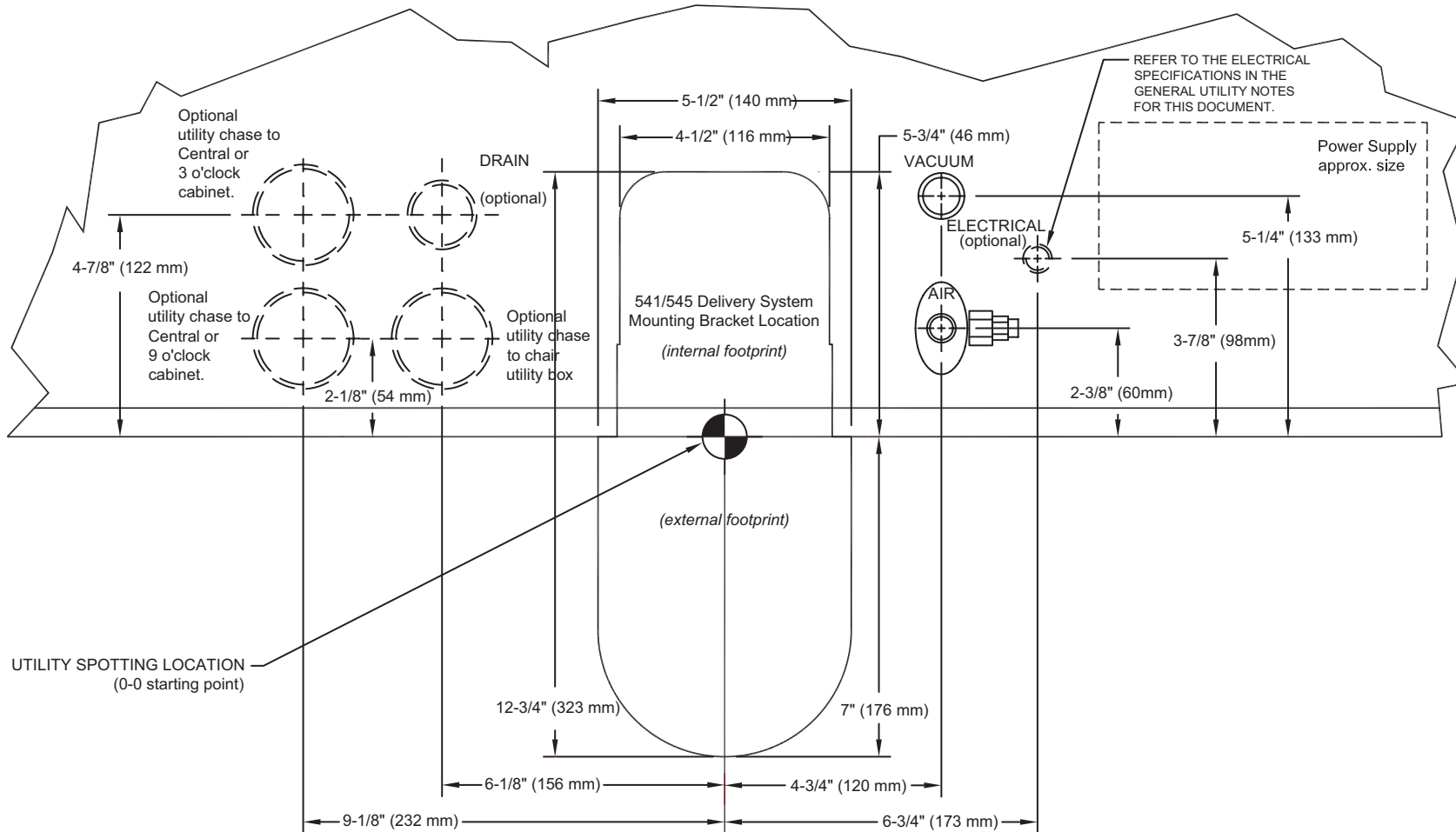
Standard Wood Wall Construction with Utilities, 2" x 6" (38 mm x 140 mm) Minimum

The starting point for all plumbing utility dimensions are referenced by a spotting target (●). This marks the intersection of the mounting bracket center line and the front side of the 12 o'clock wall.



Non-Standard Wall Construction with Utilities, 7-1/2" (191 mm) Depth Minimum

- The plumbing locations shown within this footprint are specific to metal or other wall construction methods only.
- The finished wall depth is unspecified and must be reviewed and approved by the project design team.
- The starting point for all plumbing utility dimensions are referenced by a spotting target (◐). This marks the intersection of the mounting bracket center line and the front side of the 12 o'clock wall.



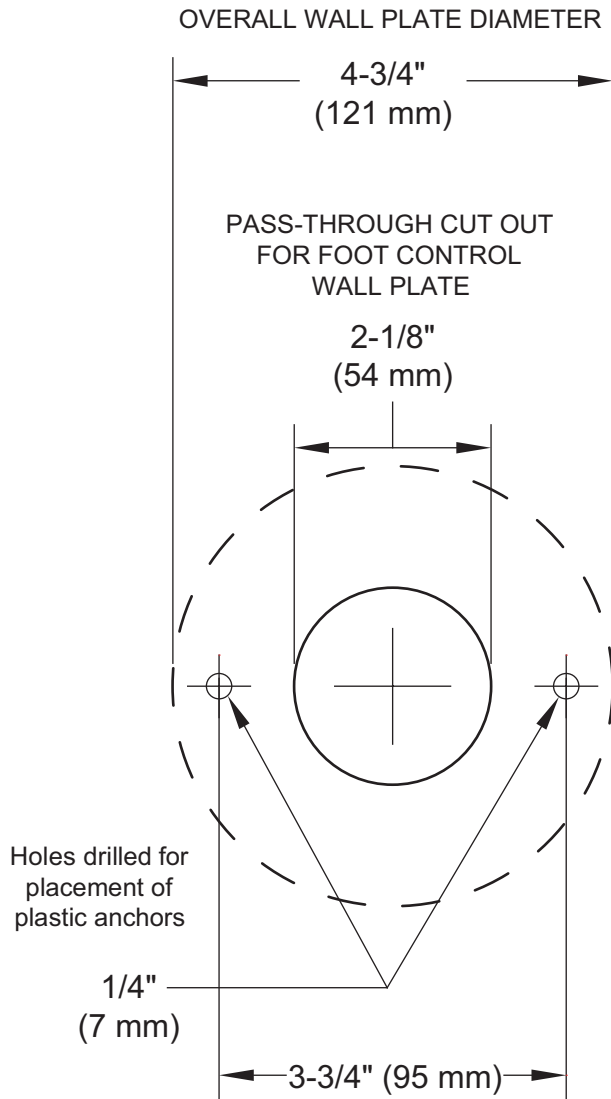
Cabinet Mount Utilities

To locate and place cabinet mount utilities, see the following documents:

- *A-dec Inspire® Dental Furniture Pre-Installation Guide* (p/n 86.0528.00)
- *Preference Collection® Dental Furniture Pre-Installation Guide* (p/n 86.0142.00)

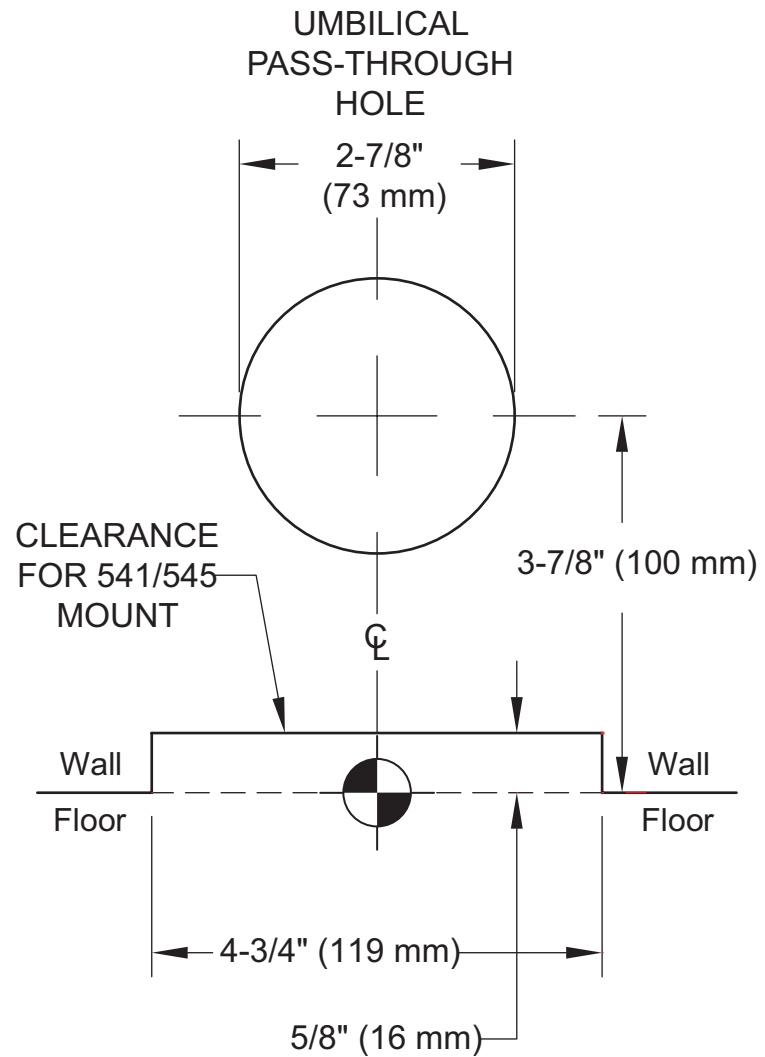
Foot Control Wall Plate

Position the foot control wall plate in any location on the wall; there is no specific placement relationship with the 541/545 mounting bracket.



Umbilical Pass-Through

The umbilical pass through hole and mounting bracket clearance slot must align with the final position of the 541/545 mounting bracket.





 **A-dec Headquarters**

2601 Crestview Drive
Newberg, Oregon 97132
United States
Tel: 1.800.547.1883 within USA/CAN
Tel: +1.503.538.7478 outside USA/CAN
www.a-dec.com

A-dec Australia

Unit 8
5-9 Ricketty Street
Mascot, NSW 2020
Australia
Tel: 1.800.225.010 within AUS
Tel: +61.(0).2.8332.4000 outside AUS

A-dec China

A-dec (Hangzhou) Dental Equipment Co., Ltd.
Building 5, No. 528 Shunfeng Road
Tangqi Town, Yuhang District,
Hangzhou, Zhejiang, China 311100
Tel: 400.600.5434 within China
Tel: +86.571.89026088 outside China

A-dec United Kingdom

Austin House
11 Liberty Way
Nuneaton, Warwickshire CV11 6RZ
England
Tel: 0800.ADEC.UK (2332.85) within UK
Tel: +44.(0).24.7635.0901 outside UK

86.0034.00 Rev F
Date of Issue 2023-06-27
Copyright 2023 A-dec, Inc.
All rights reserved.