

# A-dec 411 Dental Chair and Related Systems



A-dec 411 Chair with 333 Radius®-Style System,  
551 Assistant's, 461 Cuspidor, and 482 Monitor Mount

This document contains technical specifications for installing the A-dec 411 chair and related systems.

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## Structural Requirements



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

### Dental Patient Chair Interface Requirement

The dental chair requires a solid, level mounting surface that meets these minimum specifications:

- Weight of 1000 lb (4448 N) for the chair, dental light, delivery system, and patient.
- Capability to anchor the chair to the floor, with a minimum pullout load of 100 lb (445 N) for one anchor-bolt.

## Utility Requirements



**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.

### Air

- 1/2" (13 mm) nominal pipe compression fitting protruding 2" (51 mm) from the finished floor or wall, supplied by the contractor.
- Right angle manual shut-off valve supplied by the dental dealer and installed by the contractor.
- Air pressure and flow of 80-100 psi (550-860 KPa), 2.5 scfm. (71 sl/min) during normal use; 7.5 scfm (210 sl/min) peak intermittent flow.
- Air plumbing to be flushed clean before the final connection to the dental equipment.

## Water



**NOTE** The delivery system comes with a self-contained water bottle. Municipal water is only required if the equipment configuration includes a cuspidor or if the facility has special requirements.

- 1/2" (13 mm) nominal pipe compression fitting protruding 2" (51 mm) from the finished floor or wall, supplied by the contractor.
- Right angle manual shut-off valve supplied by the dental dealer and installed by the contractor.
- Water pressure and flow of 60 ± 20 psi (410 ± 140 KPa), 1.5 gpm (5.7 L/min), not to exceed 104°F (40°C).
- Water plumbing to be flushed clean before the final connection to the dental equipment.

## Electrical

- 1/2" (13 mm) conduit and box with a hospital-grade duplex receptacle supplied by the contractor.
- Wire box to conform to local codes.
- Top of duplex should not be higher than 4.25" (108 mm) above the finished floor to fit within the floor box.
- Voltage: 120 volts, 3 wire.
- 110-120 VAC, 50-60 Hz, 15 Amp mains breaker min.



**NOTE** The A-dec 411 chair is rated at 10 Amps max.

- The 10 Amp rating breaks down as follows for 120 VAC @ 60 Hz:
  - 3.5 Amps for the chair pump motor to move the chair base up.
  - 1.0 Amps for the chair back motor to move the chair back up or down.
  - 2.5 Amps for the 300-watt power supply (located in the utility area) to power the chair-mounted dental light and other ancillaries.
  - 3 Amps of additional current for mains voltage ancillary products, such as video monitors.

## Central Vacuum

- Plumbing up to the floor box utility center and its termination point is to be specified by the central vacuum supplier (terminates in the utility center).
- Wet systems:
  - Plumbing to terminate with 5/8" (16 mm) O.D. tube protruding 1" perpendicular to the floor.
  - 10 ± 2 in Hg, 9 scfm minimum.

## Gravity Drain



**NOTE** Gravity drains are needed only on systems with a cuspidor.

- 1-1/2" (38 mm) nominal pipe protruding 1" (25 mm) from finished floor. Trap to be placed in line, conforming to local codes, contractor-supplied.
- Floor mount only. Not recommended for wall mount utilities.

## Shipping Weights

Product/Box	Est. Shipping Weight
A-dec 411 Chair	410 lb (186 kg)
A-dec 332/333 Delivery System	88 lb (40 kg)
A-dec 461 Cuspidor with Support Center	66 lb (30 kg)
A-dec 551 Assistant's Instrumentation (assistant's arm only)	20 lb (9.1 kg)
A-dec 572/572L Dental Light	47 lb (21 kg)
A-dec 372 Dental Light	47 lb (21 kg)
A-dec 482 Radius-Style Monitor Mount (mount hardware only; without monitor)	10 lb (4.5 kg)
Back Mount and Support Link (required with 551 module)	15 lb (6.8 kg)

## Documentation References

Document Title	p/n
<b>Installation Guides</b>	
A-dec 411 Dental Chair with Radius-Style Delivery System and Dental Light	86.0378.00
A-dec 461 Support Center	86.0387.00
A-dec 551 Assistant's Instrumentation	86.0388.00
A-dec 482 Monitor Mount	86.0410.00
A-dec 382 Monitor Mount	86.0413.00
A-dec 572L Dental Light on an A-dec 411 or A-dec 511 Dental Chair	86.0333.00
<b>Instructions for Use</b>	
A-dec 411 Dental Chair	86.0374.00
A-dec 461 Cuspidor with Support Center	86.0375.00
A-dec 551 Assistant's Instrumentation	86.0603.00
A-dec Self-Contained Water System	86.0609.00
A-dec Monitor Mounts	86.0309.00
<b>Service Information</b>	
A-dec Dental Chairs Service Guide	86.0380.00
A-dec Dental Chairs Service Reference	86.0381.00
A-dec Delivery Systems Service Guide	86.0382.00
A-dec Delivery Systems Service Reference	86.0383.00
A-dec Dental Lights and Monitor Mounts Service Guide	86.0326.00
A-dec Dental Lights and Monitor Mounts Service Reference	86.0328.00
<b>Templates</b>	
A-dec 411 Chair Template	86.0386.00
A-dec 411 Related Modules Template	86.0385.00
A-dec 411 Chair Mini Template	86.0386.01
A-dec Floor Boxes	85.0472.00



**NOTE** Use only full-scale templates for locating the plumbing and electrical.



**NOTE** The floor box mounting hole placements appear on the floor box base that is being installed.

## Views and Dimensions



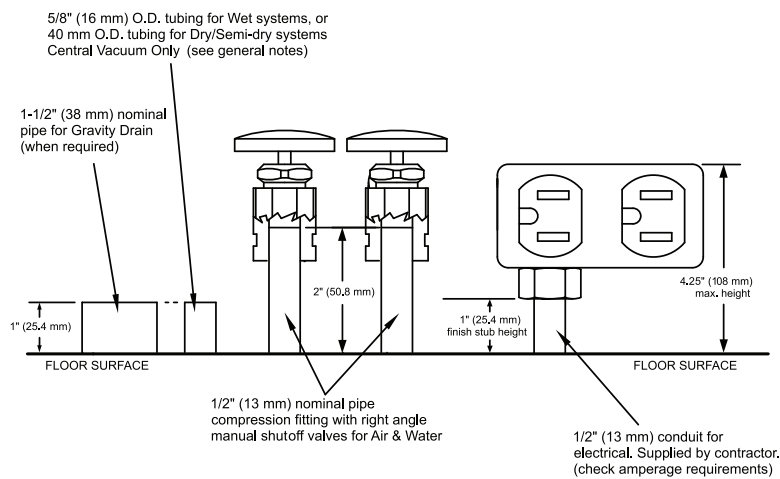
**NOTE** The dimensional drawings in this section are not to scale and are for reference only. For complete accuracy, use the appropriate full-sized templates.

### Utility Placement

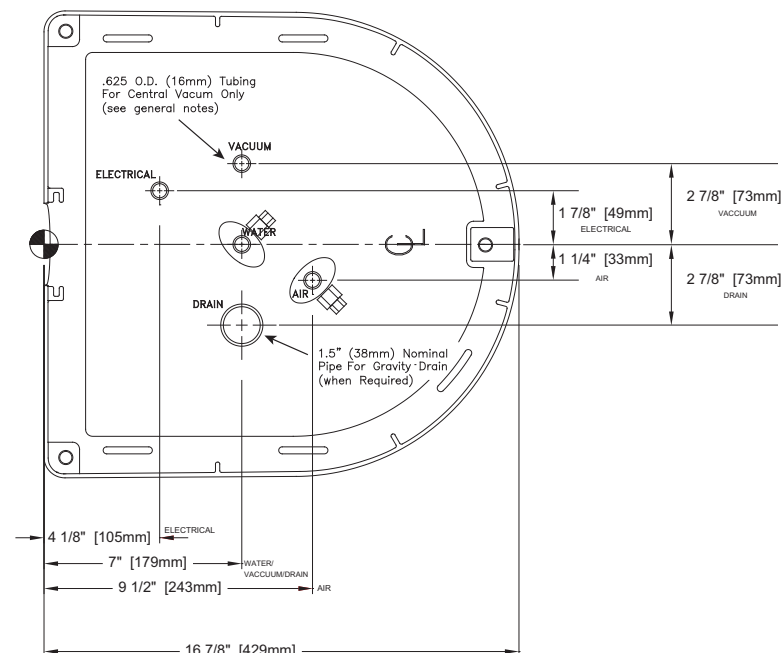


**CAUTION** Due to specific plumbing elevation restrictions, the height and placement of utilities in the floor box can affect the ability to use the floor box cover. Failure to provide adequate space will prevent installation and removal of the cover (see Figure 1). Please reference the appropriate full-size template which includes all of the necessary space constraints.

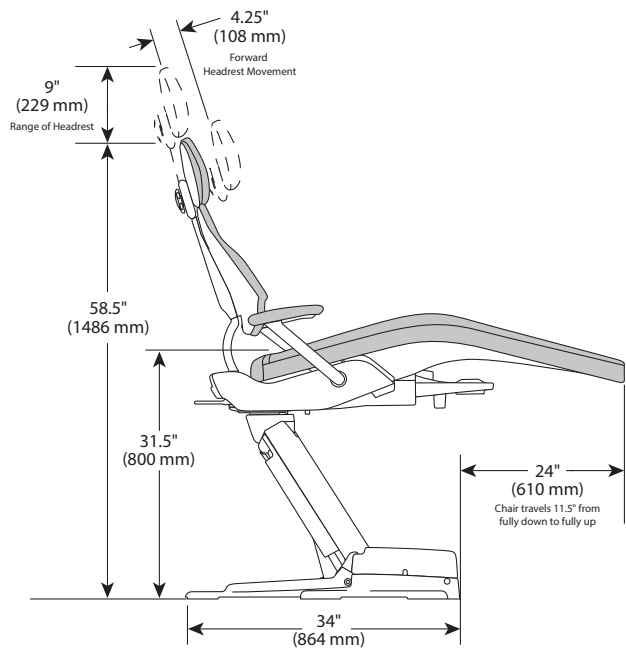
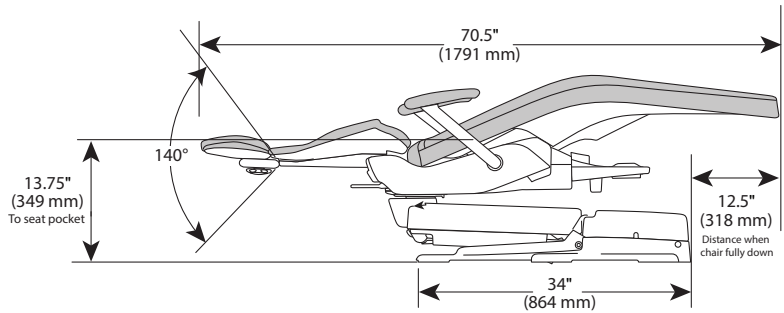
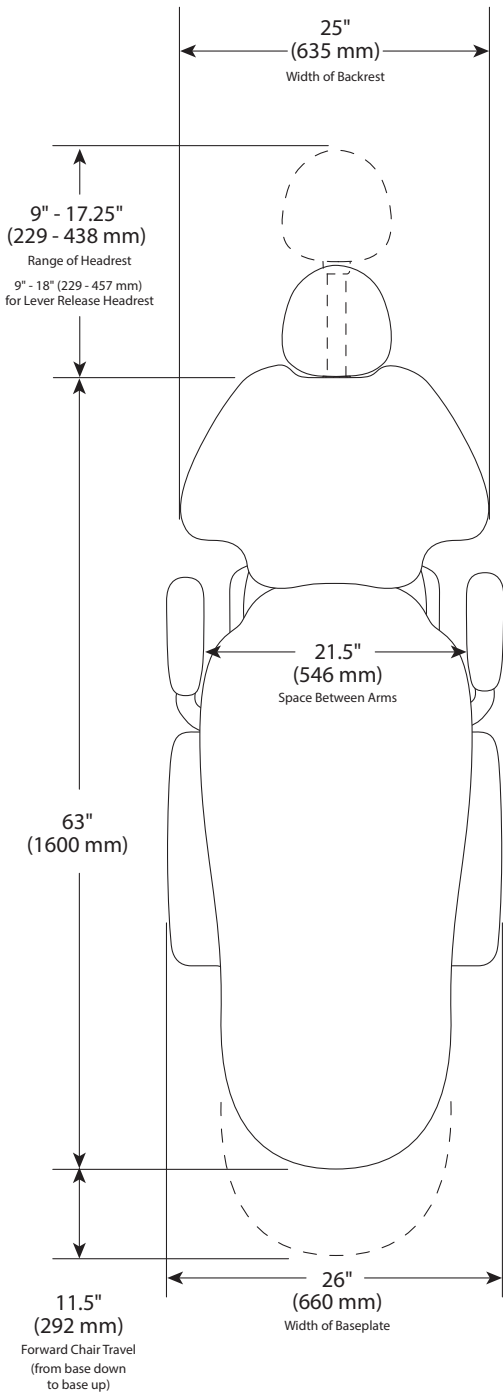
**Figure 1. Plumbing Elevations**



**Figure 2. Floor Box Utility Connections**

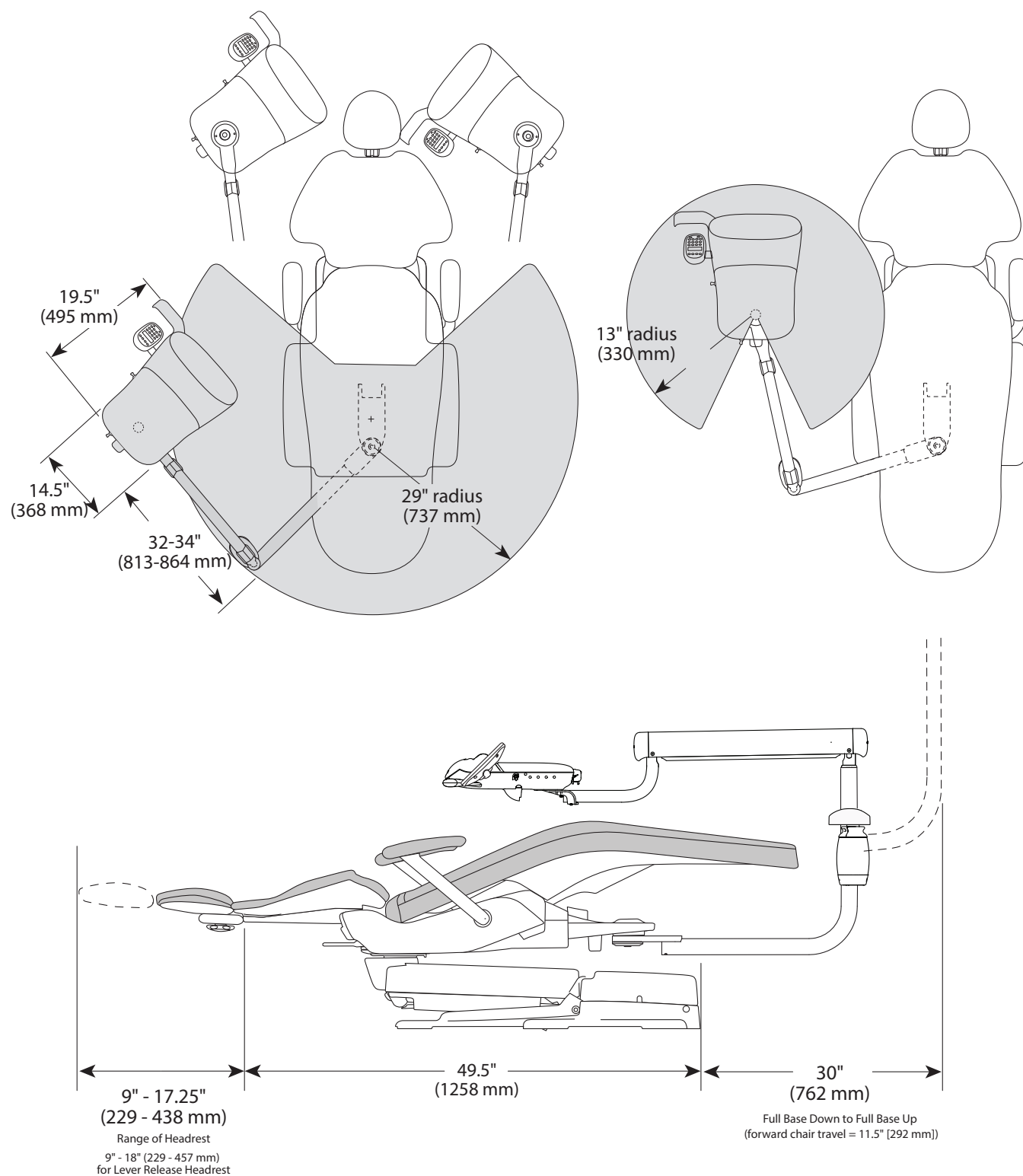


**A-dec 411 Chair**  
**Plan View with Elevation**



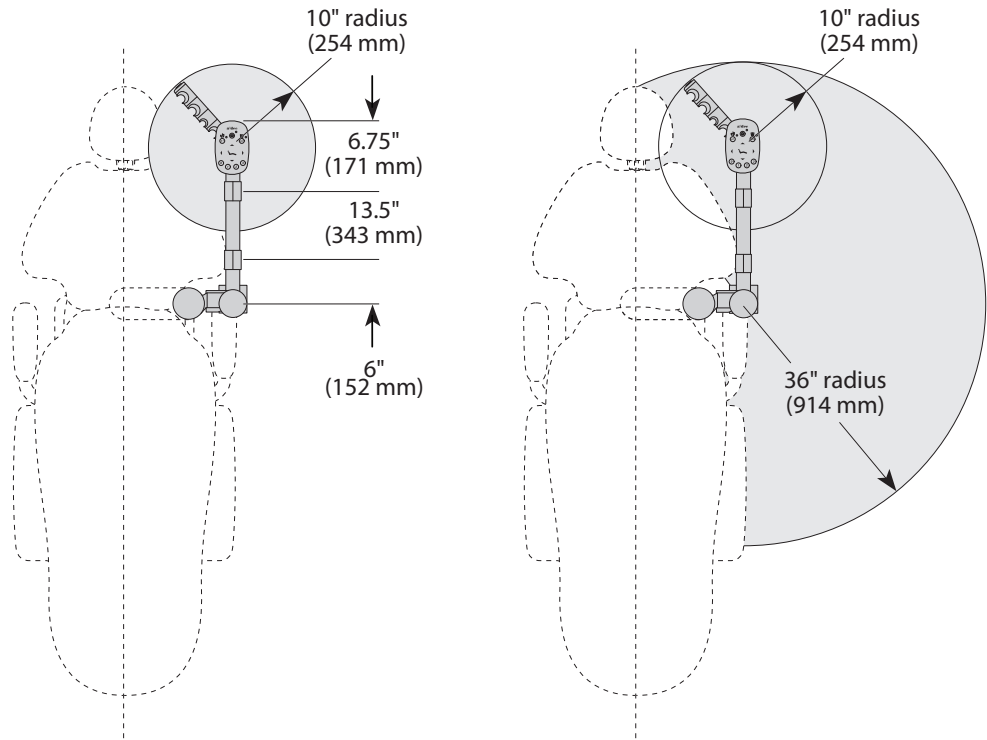
## A-dec 332/333 Radius-Style Delivery System Plan View with Elevation

(shown with 333 system)

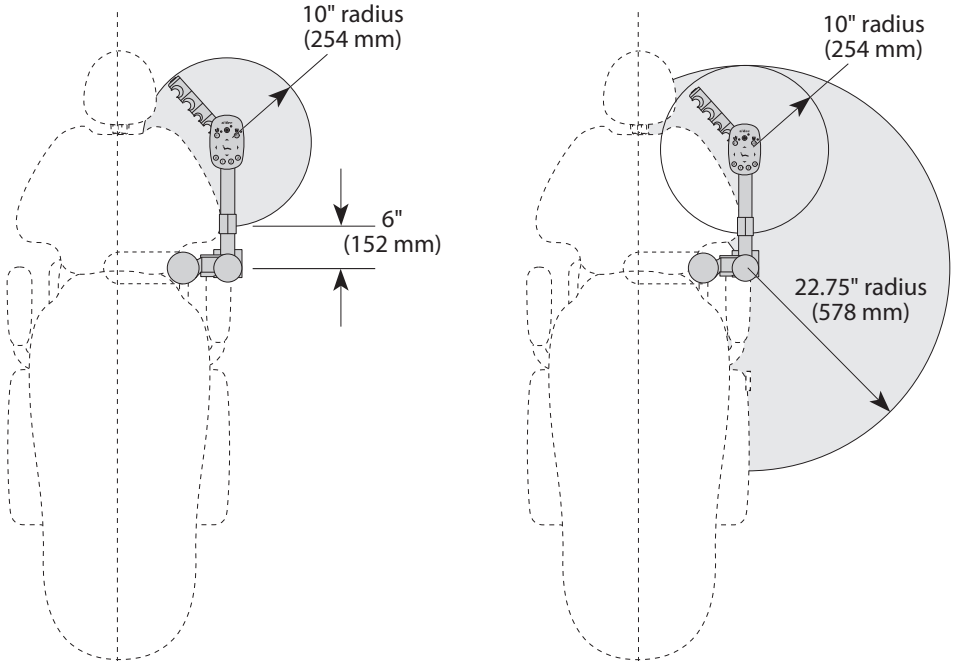


**A-dec 551 Assistant's Instrumentation**  
**Plan View**

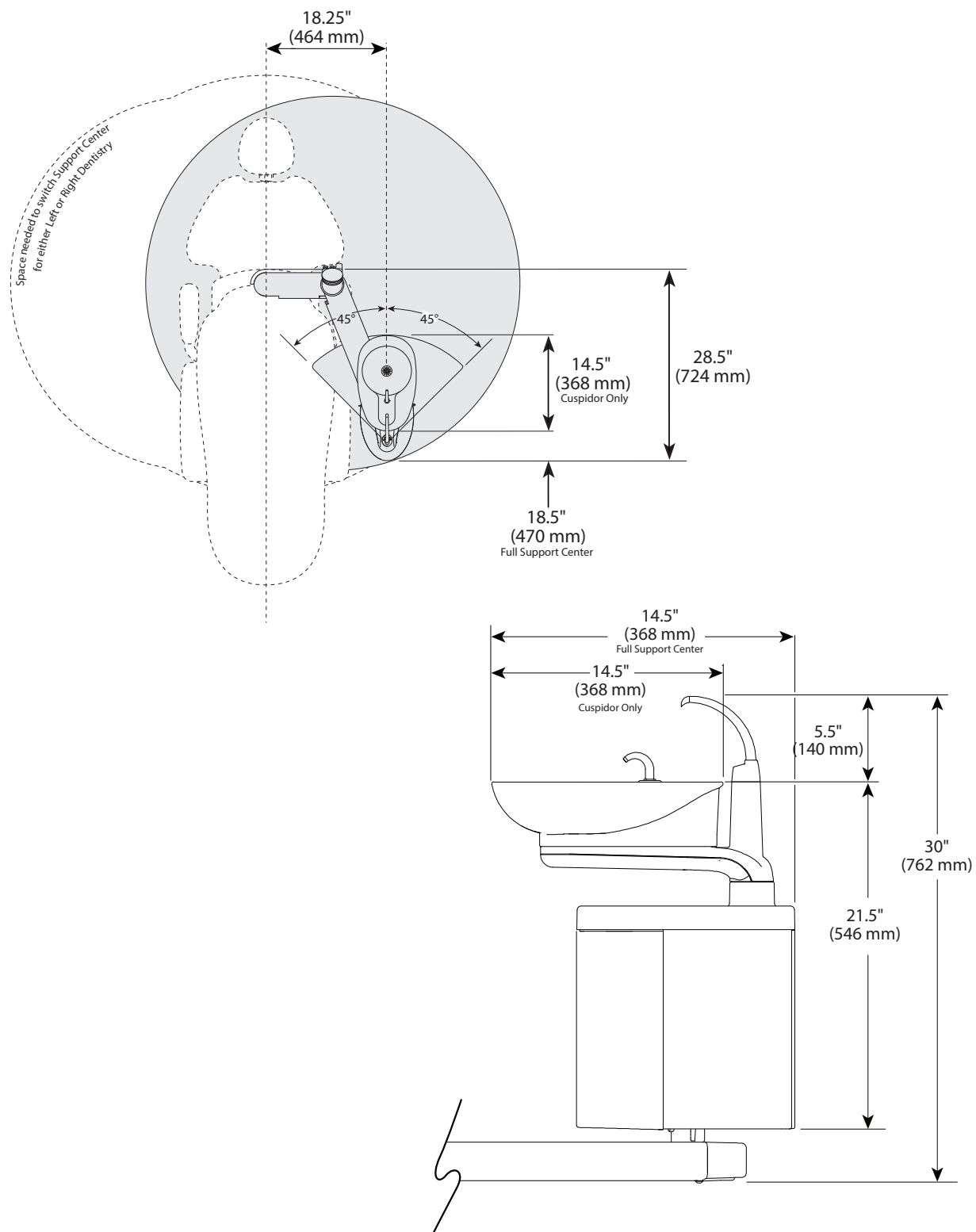
**Long Arm**



**Short Arm**



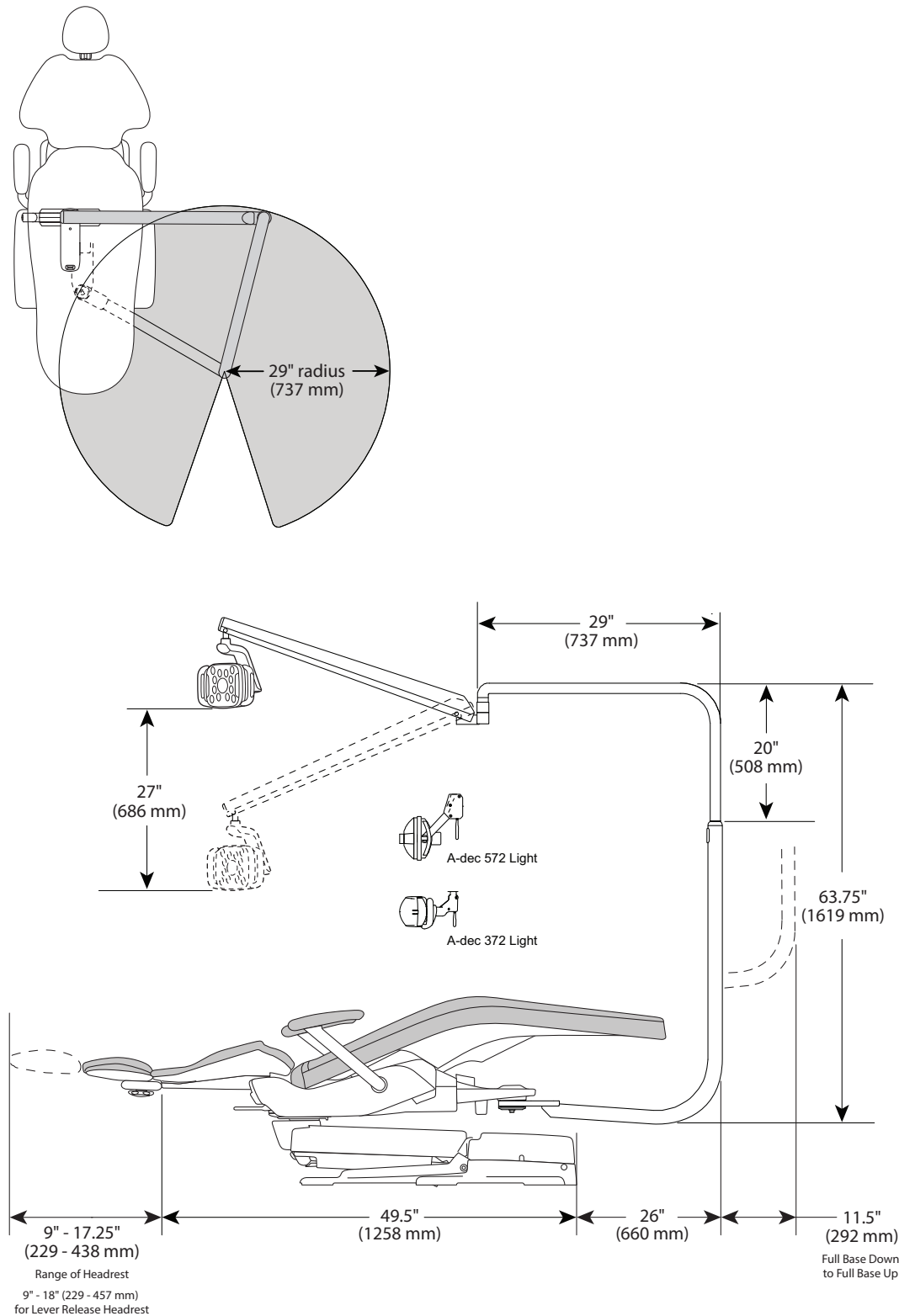
## A-dec 461 Cuspidor with Support Center Plan View with Elevation





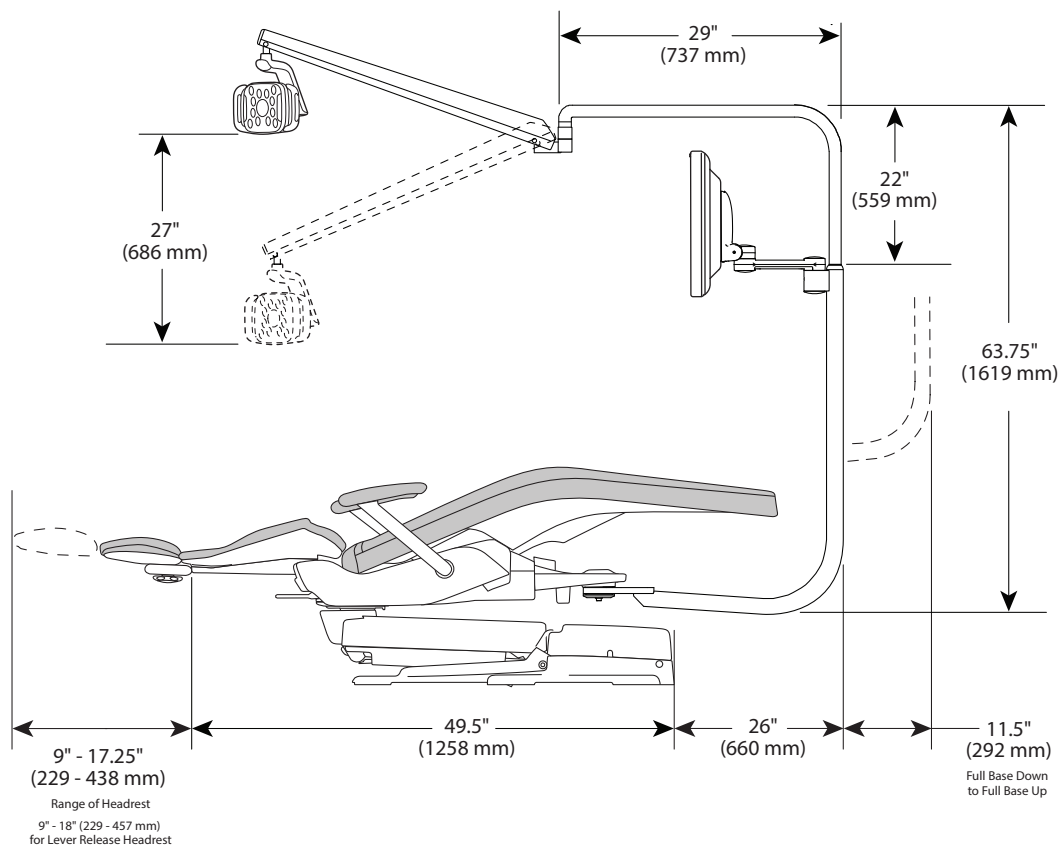
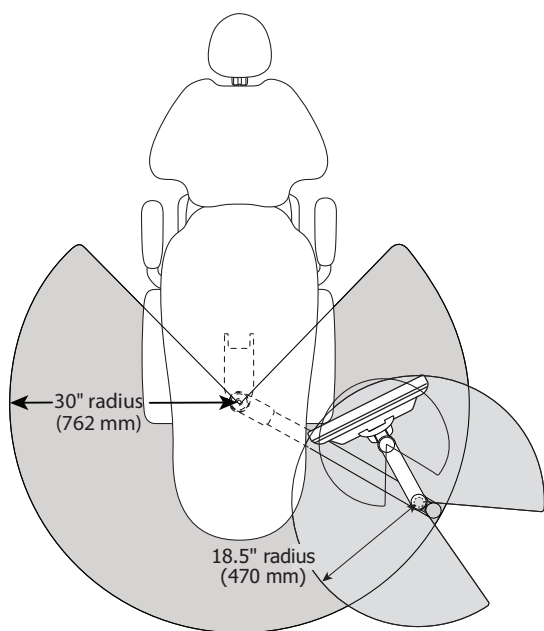
**A-dec 572, 572L, and 372 Dental Light**  
**Plan View with Elevation**

(shown with A-dec 572L LED Dental Light)

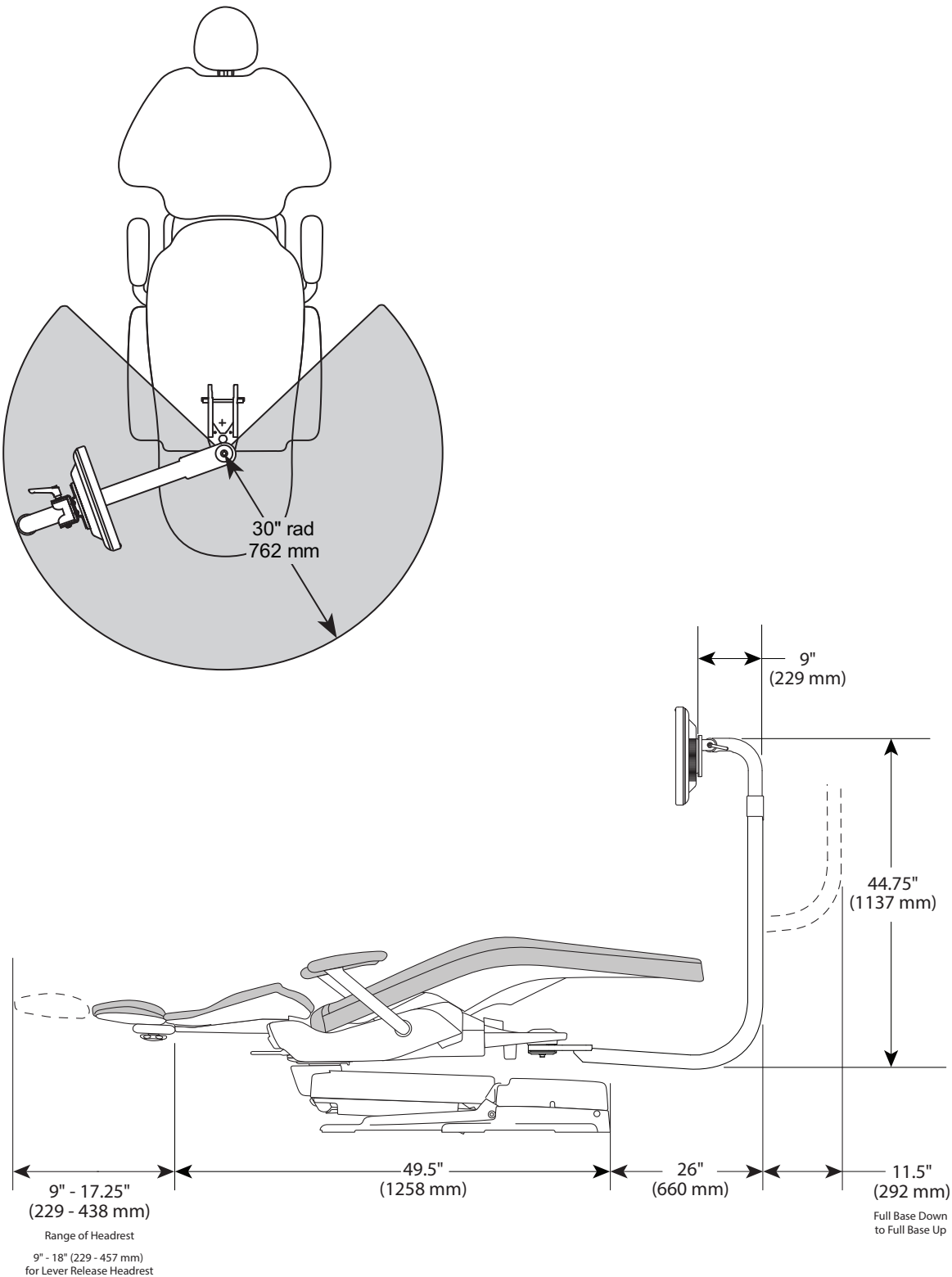


## A-dec 482 Monitor Mount with Dental Light

### Plan View with Elevation



**A-dec 382 Radius-Style Monitor Mount**  
**Plan View with Elevation**



## Regulatory Information

Regulatory information is provided with A-dec equipment as mandated by agency requirements. This information is delivered in the equipment's *Instructions for Use* or the separate *Regulatory Information and Specifications* document. If you need this information, please go to the Document Library at [www.a-dec.com](http://www.a-dec.com).



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