

A-dec® 200



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Product Models and Versions Covered in this Document

Model	Versions	Description
200	A	Dental Chair
200	B	Delivery System
334pro/335pro	n/a	Delivery System
200	B	Support Center
200	A	Assistant's Instrumentation
200	B	Dental Light
371L/571L	A	Dental Light

Measurement Acronyms

Acronym	Definition
N	newton
psi	pounds per square inch
kPa	kilopascal
SCFM	standard cubic feet per minute
L/min	liters per minute
SLM	standard liters per minute
inHg/torr	inches/mm of mercury (pressure)

Structural Requirements



NOTE Job site construction should be completed before 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 lbs. (4450 N) for chair, dental light, delivery system, and patient.
- Capability to anchor chair to the floor, with a minimum pullout load of 100 lbs. (445 N) for one anchor-bolt.

Utility Requirements



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



CAUTION The manner and method for accessing 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 finished floor or wall, supplied by contractor.
- Right angle manual shut-off valve supplied by the dental dealer and installed by contractor.
- Air pressure and flow of 80-125 psi (550-860 kPa), 2.5 SCFM (71 L/min) during normal use; 7.5 SCFM (210 L/min) peak intermittent flow.
- Air plumbing to be flushed clean before final connection to dental equipment.

Water



NOTE The delivery system comes with a self-contained water bottle. Municipal water is required for the cuspidor.

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

Central Vacuum

- Central vacuum supplier must specify plumbing up to floor box utility center and its termination point in the utility center.
- Plumbing to terminate with 5/8" (16 mm) outer diameter (O.D.) tube protruding 1" (25.4 mm) perpendicular to the floor.
- Wet systems:
 - **Pressure/Vacuum:** 10±2 in Hg (34±7 kPa)
 - **Flow:** 9 scfm (225 SL/min) minimum
- Dry/semi dry systems:
 - **Pressure/Vacuum:** 4.5±1 in Hg (16±3.5 kPa)
 - **Flow:** 12 scfm (340 SL/min) minimum
- Data:
 - 2" (51 mm) conduit, supplied by the contractor, located as needed, and as many as required. For installations requiring Ethernet, run Cat5e or Cat6 cable.

Head Loss With Respect to Flow

The following table includes information about high volume evacuator (HVE) and saliva ejector (SE) head loss with flow for an A-dec 200 assistant's instrumentation on a A-dec 200 support center.

Tubing and HVE/SE	90 NL/min (3.18 SCFM)	170 NL/min (6.00 SCFM)	250 NL/min (8.82 SCFM)
Durr 15mm HVE (large bore) valve with 16 mm EasyFlex Tubing & 15 mm canister connection (p/n 11.1332.00)	0.06 in-Hg (0.20 kPa)	0.19 in-Hg (0.64 kPa)	0.59 in-Hg (2.00 kPa)
A-dec SE (standard bore) valve with 10 mm EasyFlex Tubing & 11 mm canister connection (p/n 12.1263.01)	0.75 in-Hg (2.54 kPa)	5.47 in-Hg (18.52 kPa)	Exceeds 12 in-Hg (40.64 kPa) at flow rates above ~250 NL/min.
Durr 15mm HVE (large bore) valve with 16 mm EasyFlex Tubing & 11 mm canister connection (p/n 90.1287.00)	0.07 in-Hg (0.24 kPa)	0.23 in-Hg (0.78 kPa)	0.72 in-Hg (2.44 kPa)
A-dec 11mm HVE (standard bore) valve with 16 mm EasyFlex Tubing & 11 mm canister connection (p/n 90.1566.00)	0.08 in-Hg (0.27 kPa)	0.25 in-Hg (0.85 kPa)	0.73 in-Hg (2.47 kPa)
A-dec 11 mm HVE (standard bore) valve with 16 mm EasyFlex Tubing & 11 mm canister connection (p/n 90.11.1353.00)	0.08 in-Hg (0.27 kPa)	0.25 in-Hg (0.85 kPa)	0.73 in-Hg (2.47 kPa)
Durr SE (standard bore) valve with 6 mm PVC Tubing (p/n 12.1253.00)	1.53 in-Hg (5.18 kPa)	Exceeds 12 in-Hg (40.64 kPa) at flow rates above ~170 NL/min.	

Gravity Drain

- 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.
- Waste water drain must have a minimum slope of 1/4" per foot (21 mm per meter) and accommodate a flow of 4.5 gpm (17 L/min) without overflow.

Electrical

- 1/2" (13 mm) conduit and box with a hospital-grade power receptacle supplied by the contractor.
- Wire box to conform to local codes.
- Top of the receptacle should not be higher than 5" (127 mm) above finished floor for fit within floor box.

See the following table for voltage and amperage ratings:

Chair Type	Required Electrical Supply	Amperage Rating	Amperage Breakdown
240 V Chair	220-240 VAC, 50-60 Hz, 10 Amps minimum	10 Amps max	240 VAC @ 50-60 Hz: 2 Amps – chair pump motor 1.4 Amps – 300-watt power supply 2 Amps – ancillary products
100 V Chair	100 VAC, 50-60 Hz 15 Amps min (20 Amps recommended)	10 Amps max	100 VAC @ 50-60 Hz: 3.5 Amps – chair pump motor 2.5 Amps – 300-watt power supply 2 Amps – ancillary products
120 V Chair	110 - 120 VAC, 50-60 Hz 15 Amps min (20 Amps recommended)	10 Amps max	120 VAC @ 50-60 Hz: 3.5 Amps – chair pump motor 2.5 Amps – 300-watt power supply 2 Amps – ancillary products

Shipping Weights

Product/Box	Est. Shipping Weight
A-dec 200 Chair	337 lb (153 kg)
A-dec 200 Delivery System	53 lb (34 kg)
A-dec 200 Support Center	66 lb (30 kg)
A-dec 200 Dental Light	24 lb (11 kg)

Documentation References

Installation Guides:

- A-dec 200 Installation Guide . . . p/n 86.0004.00

Service Guides:

- A-dec 200 Service Guide p/n 86.0016.00

Instructions for Use:

- A-dec 200 Instructions For Use . . p/n 86.0024.00
- A-dec Equip. Asepsis Guide . . . p/n 85.0696.00
- Regulatory and Specifications. . . p/n 86.0221.00

Full-Size Templates:



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

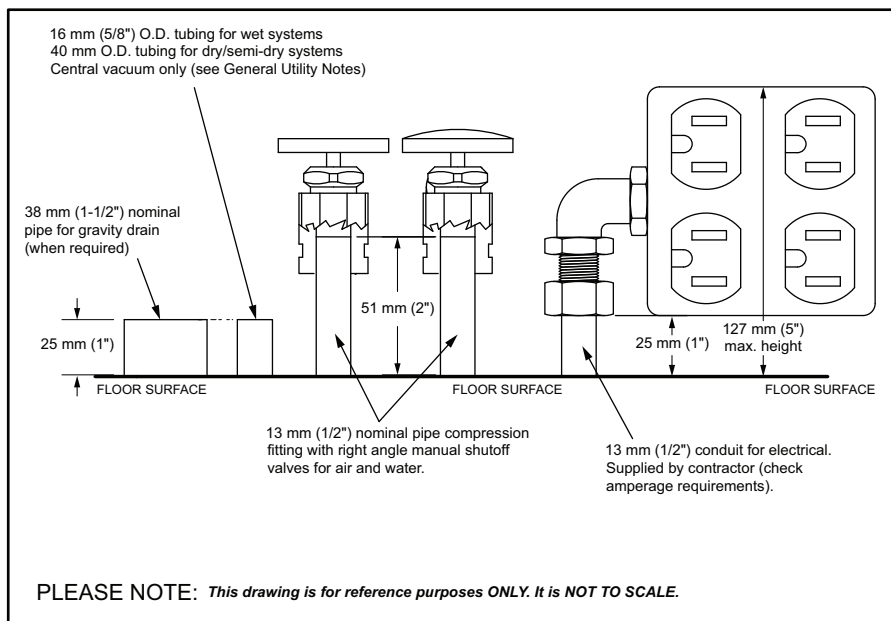
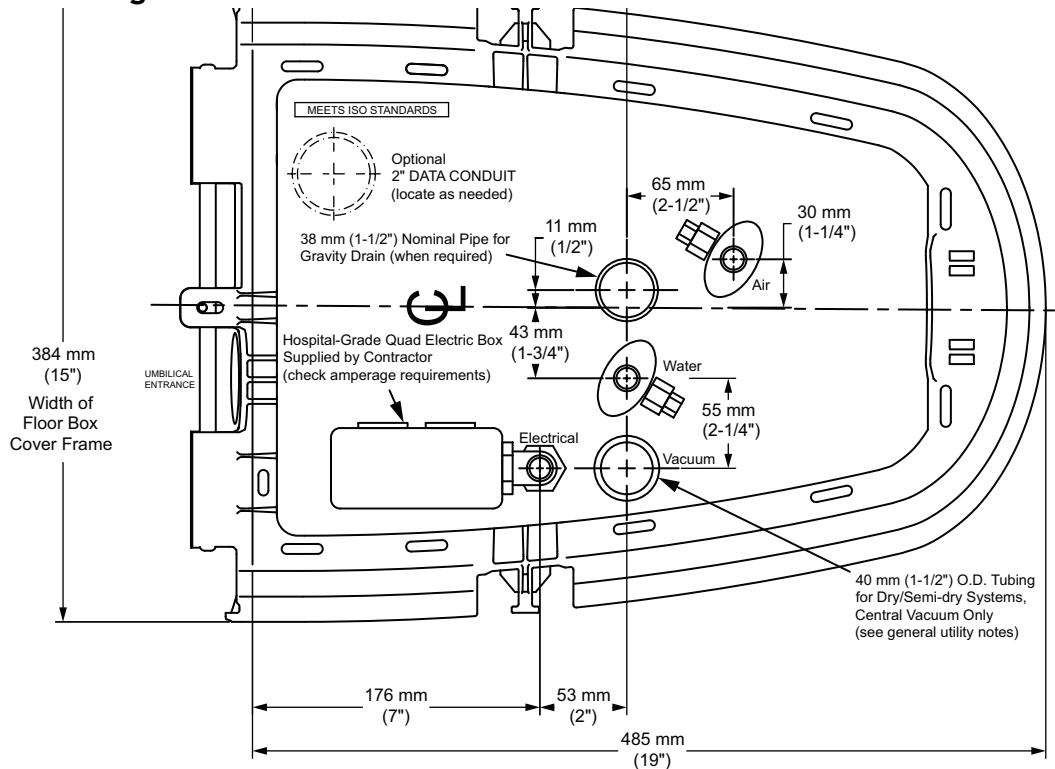
- A-dec 200 Full Line Product . . . p/n 86.0296.00

Views and Dimensions



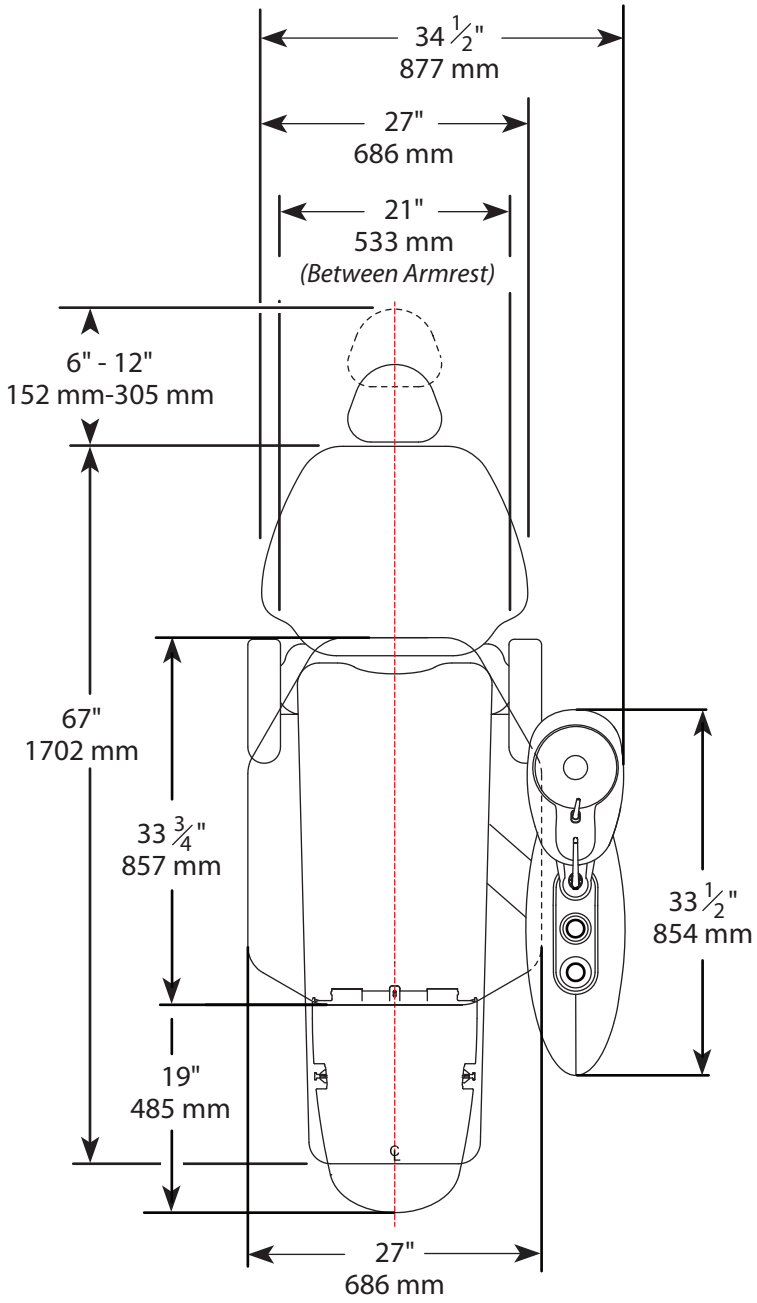
NOTE The dimensional drawings in the following pages are not to scale and are for reference only. For complete accuracy, use the appropriate full-sized templates.

Plumbing Plan and Elevation Views



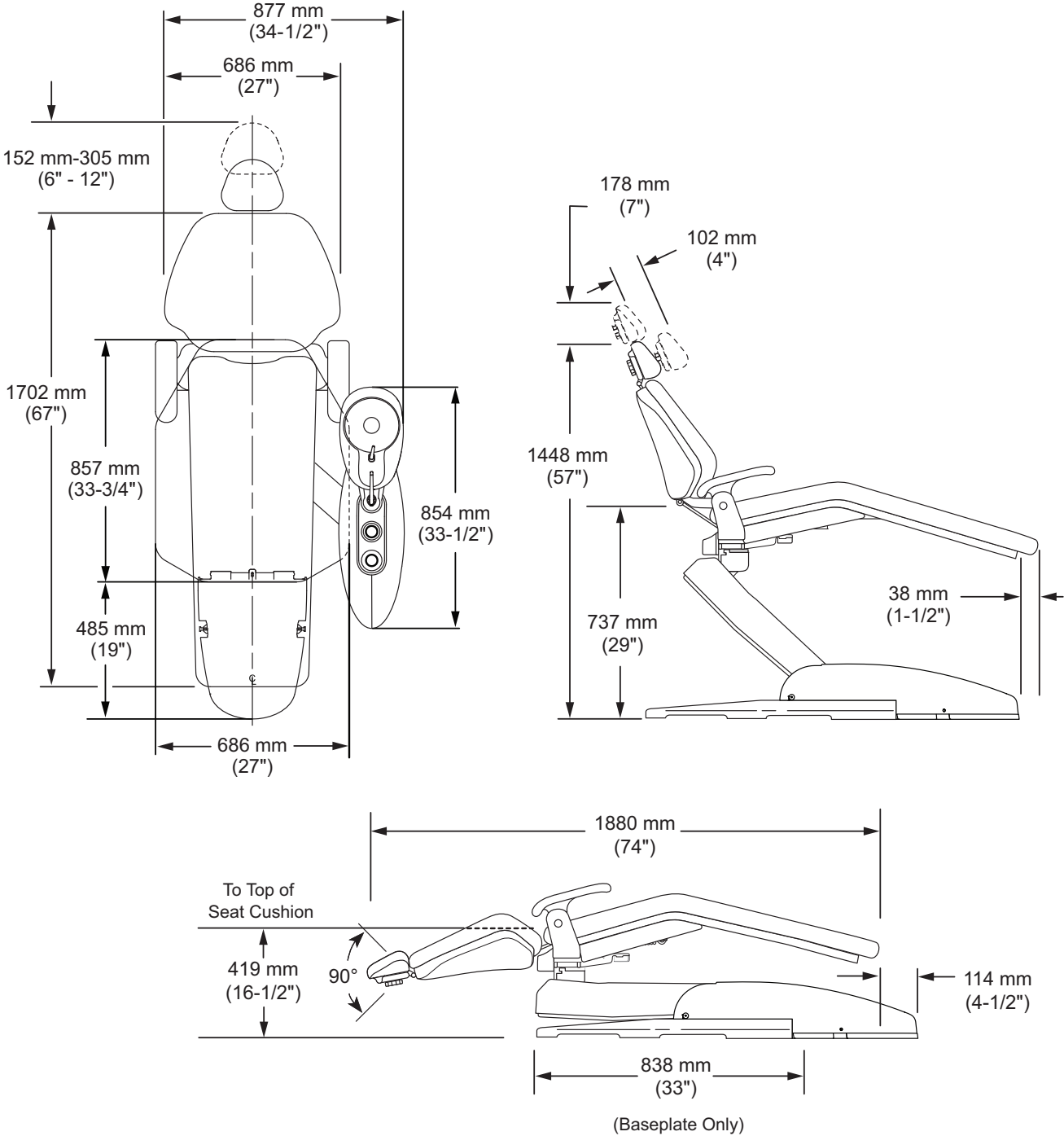
CAUTION Local regulation requires licensed plumbers and electricians to install utilities. All plumbing and utilities must conform to prevailing local codes.

A-dec 200 Chair with Support Center Plan View



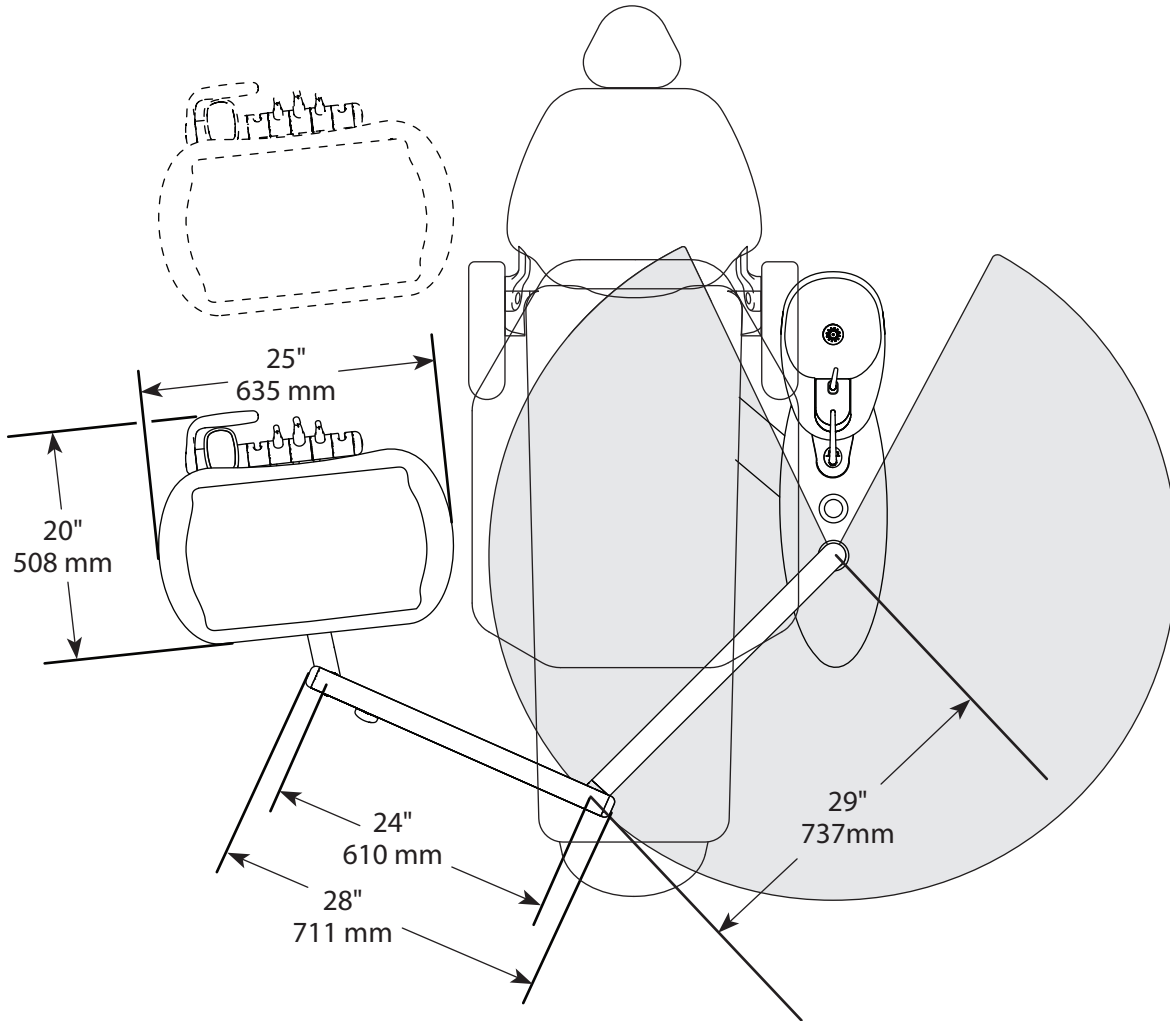
A-dec 200 Chair Plan View with Elevation

(shown with chair-only for clarity)



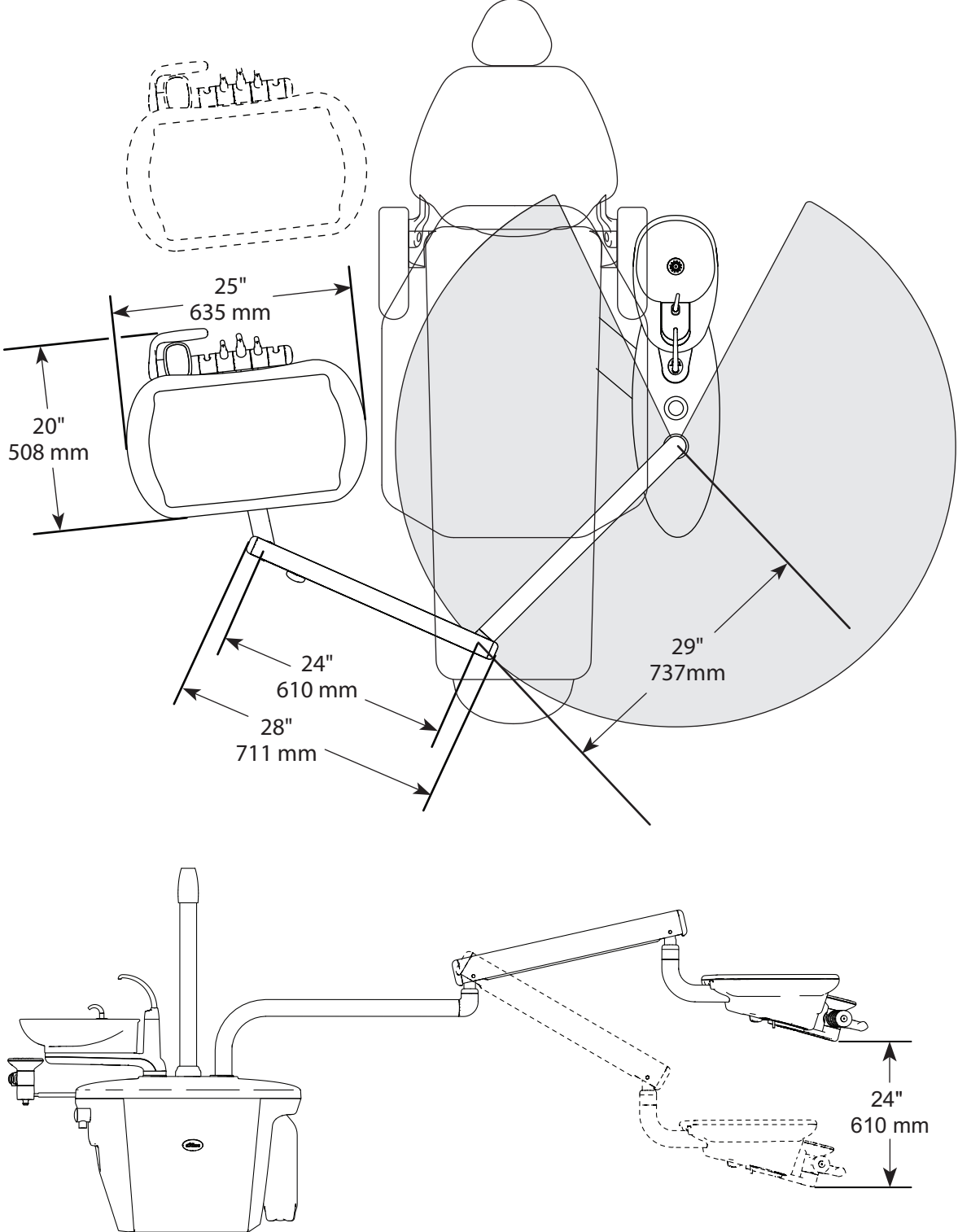
A-dec 200 Delivery System Plan View

(shown with only system dimensions for clarity)



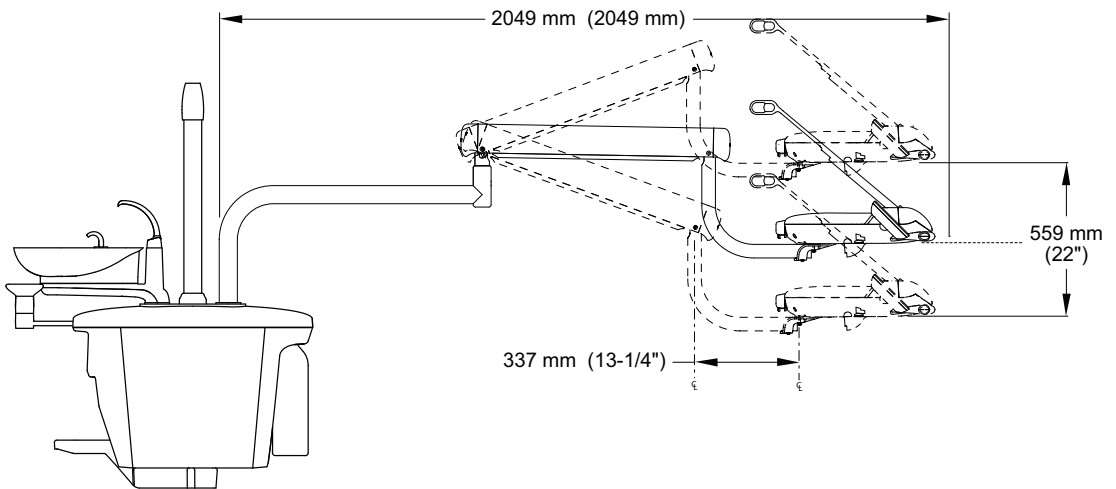
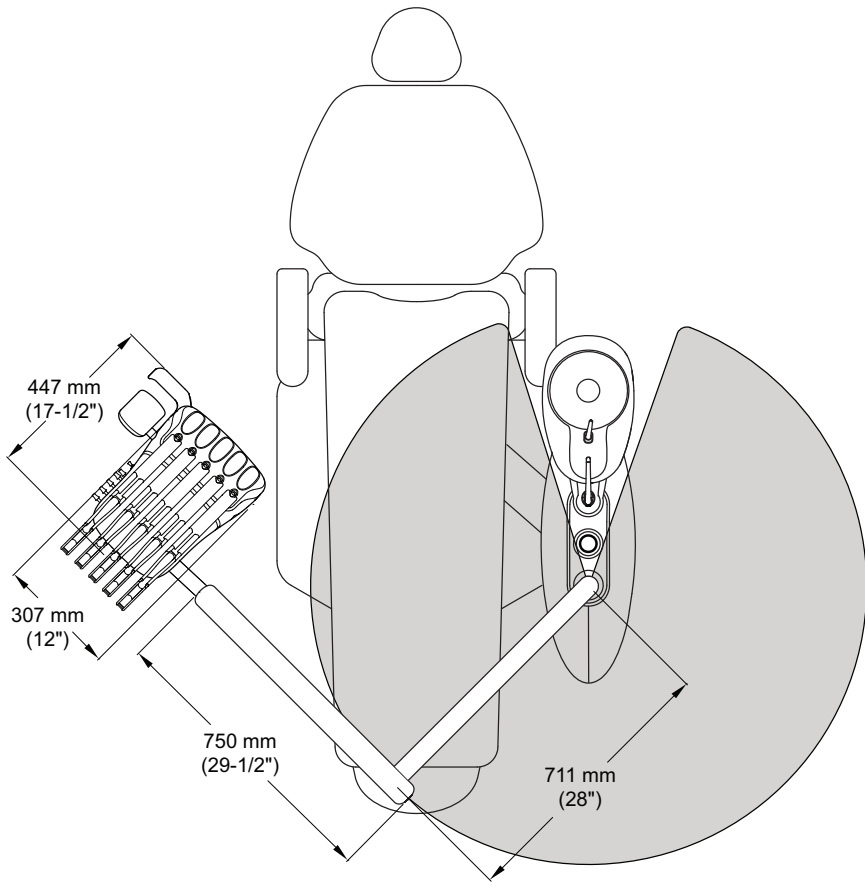
A-dec 200 Delivery System Plan View with Elevation

(shown with only system dimensions for clarity)



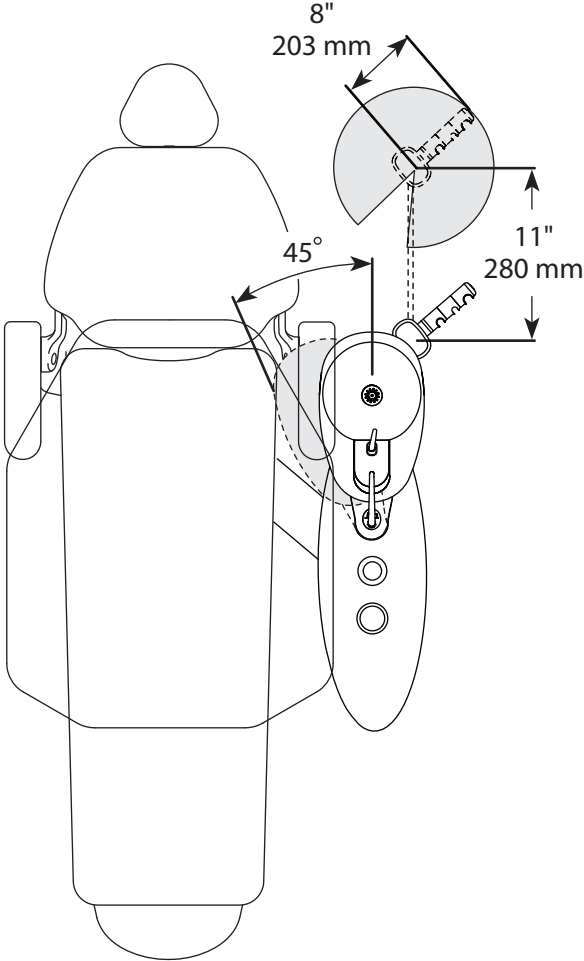
A-dec 200 Chair with 334pro/335pro Delivery System Plan View with Elevation

(shown with only system dimensions for clarity)



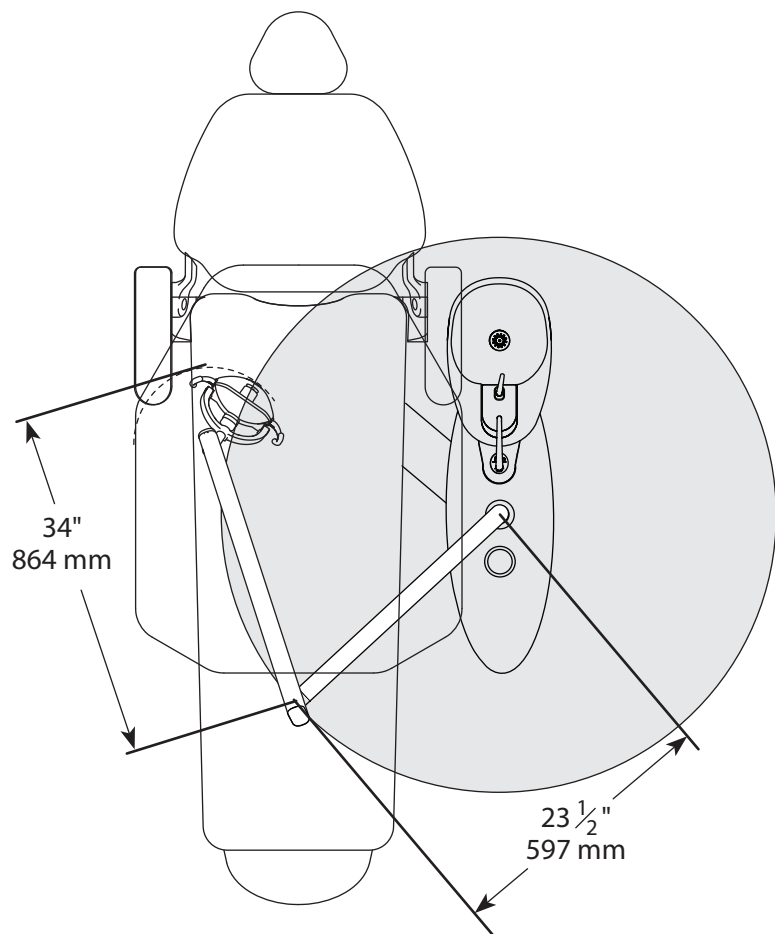
A-dec 200 Chair with Support Center/Cuspidor/Assistant's Instrumentation Plan View

(shown only with assistant's instrumentation dimensions for clarity)



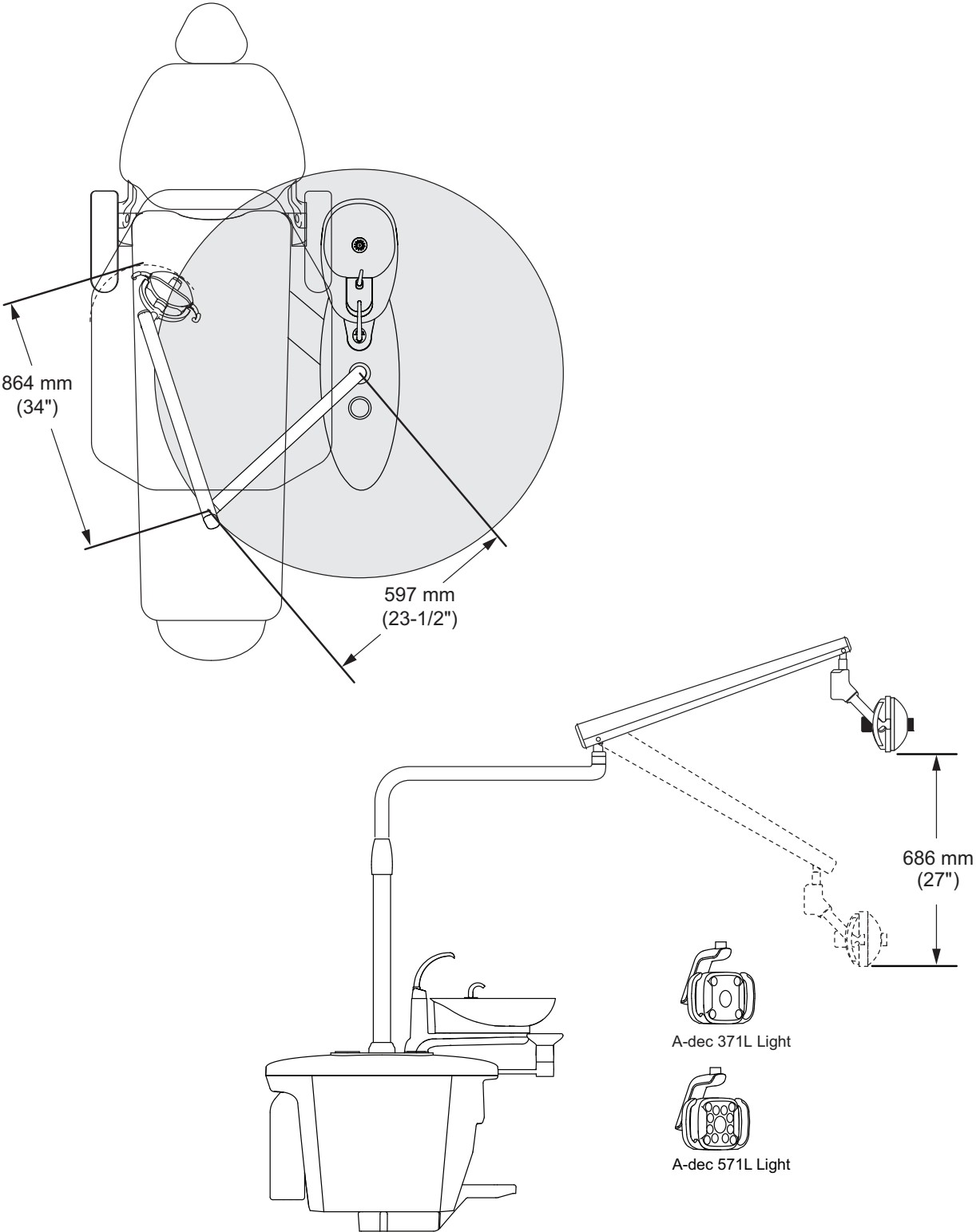
A-dec 200 Dental Light Plan View

(shown only with dental light dimensions for clarity)



A-dec 200 Dental Light Plan View with Elevation

(shown only with dental light dimensions for clarity)



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.



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