PRE-INSTALLATION MANUAL

REQUIREMENTS AND SPECIFICATIONS FOR INSTALLATION OF DENTAL CHAIRS

SPRINT Quality LÓGIC INFINITY

REQUIREMENTS AND SPECIFICATIONS

To install a dental chair in a clinic, it is necessary to follow a series of requirements and specifications to ensure the safety of both the patient and the dentist, as well as the proper functioning of the equipment. These requirements range from the preparation of the physical space to the installation of the equipment.

Only a technician authorized by Olsen may unpack, install, maintain, and service the product. To access the Accredited Technical Support Network for installation and maintenance, visit our website at www.olsen.odo.br/our-partners/assistance-technical/.

It is essential that the execution of the projects is carried out in accordance with current technical standards and regulations, with appropriate supervision throughout the process. This document aims to provide specifications based on the normative guidelines.

SPACE

It is necessary to ensure that the space where the dental chair will be installed is adequate to accommodate the equipment and allow movement for the dentist and other professionals working in the clinic.

Additionally, it's important to ensure that there is sufficient space for the installation of other necessary dental equipment, such as an auxiliary cart and an X-ray unit, for example.

Following the guidelines of the International Standards Organization (ISO) and Federation Dentaire Internationale (FDI), we have created a chart to assist in determining the dimensions of the clinic and the correct positioning of the equipment. Figure 1 illustrates the recommended distances and work zones, using point P (where the patient's mouth will be located) as a reference. Around this point, there are three circular zones - A, B, and C - with radii of 19 11/16" (0.5 m), 39 3/8" (1 m), and 59 1/16" (1.5 m), respectively.

- Zone A (radius of 19 11/16") is designated the transfer area, which is the place to organize all the equipment necessary to be used inside the patient's mouth. Additionally, two dental stools are positioned in this area: one for the dentist and another for the assistant.
- Zone B (radius of 39 3/8") is reserved for moving the arms and opening drawers, where auxiliary tables, open drawers, working table and the assistant module are positioned.
- Zone C (radius of 59 1/16") is the delimited area of the clinic to ensure ergonomics. This space is where furniture is placed, such as fixed cabinets and sinks.

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CONNECTIONS

- We recommend that you consult an authorized technician to guide you and ensure that the installation site is suitable for receiving the new equipment.
- Use the connection template (figure 2) provided on the last page of the document to mark the indicated points. This ensures the proper arrangement of connections, providing agility in installation and future maintenance and revisions of the equipment.
- If you choose the separate junction box, position the connections at the front or on the side of the chair, ensuring they are never placed under the equipment.

ELECTRIC

- The electrical supply must comply with local regulations, have a single-phase connection and protective earthing.
- A DR circuit breaker of 10 A and 30 mA should be provided. The circuit breaker should exclusively power the dental equipment and must be easily and quickly accessible for disconnecting the equipment from the electrical network.
- The equipment has an adjustable input voltage of 118, 127, 220, and 230 VAC at the transformer, with frequency options of 50 or 60 Hz. This adjustment can only be made by an authorized technician. In case the electrical network shows variation or voltage fluctuation, it is necessary to install a power stabilizer.

COMPRESSED AIR

- The recommended dental compressor must be oil-free, with a dynamic pressure between 80 and 100 PSI (5.5 to 7.0 bar), a minimum displacement of 150 L/min and a 30 L reservoir per unit.
- It is highly recommended to install a 40 µm air filter at the unit inlet to protect the entire system* (removing impurities, particles and moisture from the compressed air), ensuring the performance and efficiency of the unit, handpieces and accessories, as well as the health and safety of the user.
- An easily accessible air valve located near the unit must be installed.

**The Infinity model comes with an air filter integrated into the unit.*

WATER

- The water network must have a working pressure of 14.5 to 58.0 PSI (1.0 to 4.0 bar) with a pH limit of 6.5 to 8.5 and a flow rate greater than 5 L/min, water hardness less than 2.14 mmol/L (<12° dH) and a maximum particle size of 100 µm.
- The equipment is supplied with a 65 µm (micron) water filter inside the bottle to ensure internal protection of the system and instruments. It is highly recommended that an additional 100 µm (micron) filter be installed at the water inlet to protect the entire system.
- The water valve must be easily accessible and located close to the equipment.
- In cases of low water pressure, it is recommended that a professional be consulted to assess the hydraulic network.
- According to ISO 7494-2:2015, it is recommended to install a water sampling point at or near the equipment's water inlet. The sampling point consists of an outlet connection with a collection valve. It is recommended that sampling and colony counting be performed by a laboratory prior to installation of the equipment to ensure water quality and the absence of unacceptable microbial contamination. The microbial count must comply with local standards for drinking water and must not exceed 500 CFU/mL under any circumstances. After installation, this procedure must be carried out periodically, or in accordance with local requirements.

SEWAGE

- The sewage system must have good water slopes with a minimum angle of 2°, a flow rate of 3.5 L/min and the use of rigid PVC pipes.
- If using an amalgam separator, connect the ¾” outlet of the sewage connector to the separator inlet. The sewage connector concentrates all the sewage and suction lines of the equipment. To install the separator, it may be necessary to use adapters that are not supplied by Olsen.

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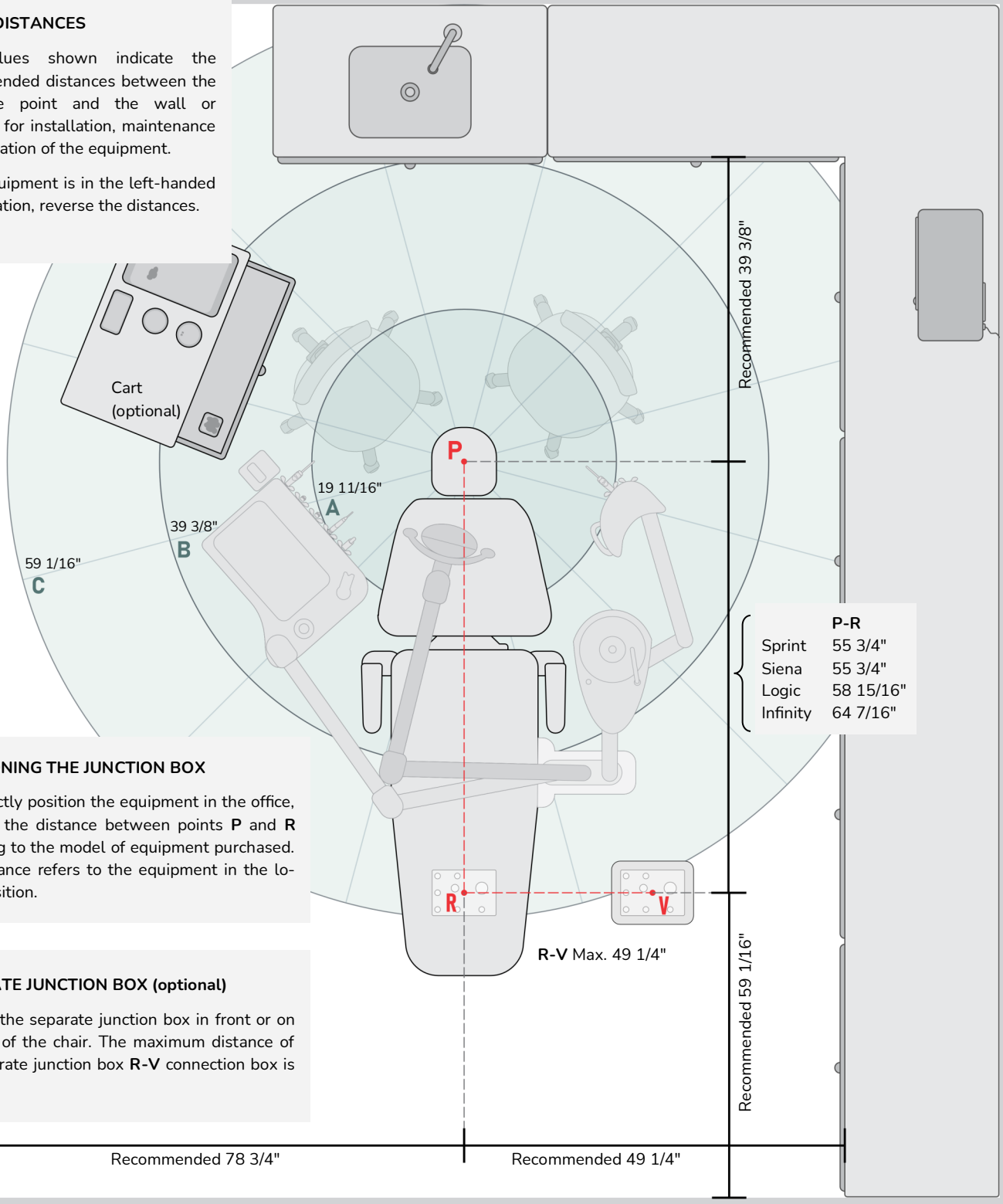
RECOMMENDED DISTANCES

(FIGURE 1)

CLINIC DISTANCES

The values shown indicate the recommended distances between the reference point and the wall or furniture for installation, maintenance and operation of the equipment.

If the equipment is in the left-handed configuration, reverse the distances.



	P-R
Sprint	55 3/4"
Siena	55 3/4"
Logic	58 15/16"
Infinity	64 7/16"

POSITIONING THE JUNCTION BOX

To correctly position the equipment in the office, consider the distance between points **P** and **R** according to the model of equipment purchased. The distance refers to the equipment in the lowest position.

SEPARATE JUNCTION BOX (optional)

Position the separate junction box in front or on the side of the chair. The maximum distance of the separate junction box **R-V** connection box is **49 1/4"**.

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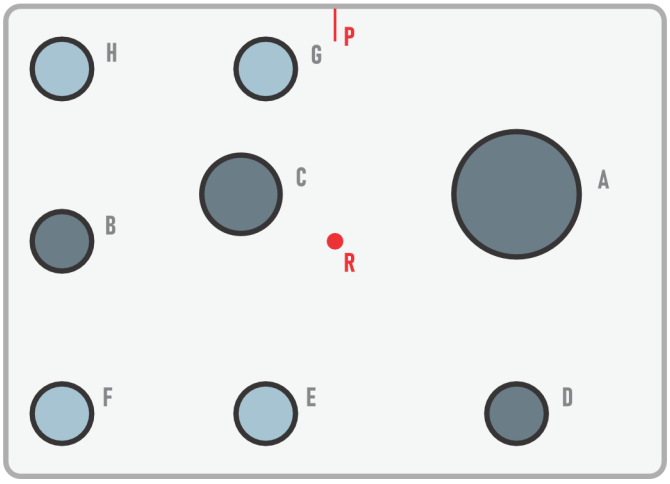
CONNECTION SPECIFICATIONS

JUNCTION BOX TEMPLATE (not to scale)



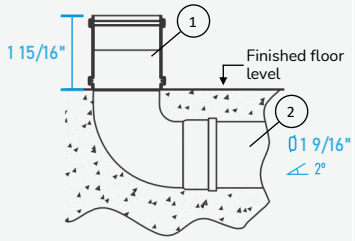
NOTES

› Use the template (figure 2, next page) to mark the indicated points. Respect the measurements of this template so that the connection box fits correctly over the pipe.

› The red line on the template indicates its orientation in relation to the chair, where it should be directed to point P, as shown in figure 1.

› Connections marked in color ◯ are optional.

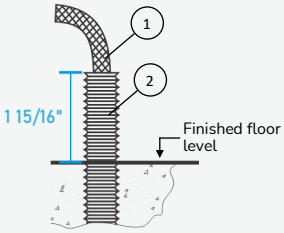
A - SEWAGE



Connect to the siphon box

- Ø1 1/2" PVC pipe (2) with simple sleeve (1);
- A 3/4" female adapter can be used, but the drain pipe must be 1 1/2";
- Minimum slope of 2°.

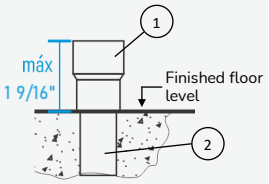
B - COMPRESSED AIR



Connect to compressor

- Ø3/4" conduit (2);
- Use braided hose (1) of:
  - Ø1/4" up to 32.80 ft;
  - Ø5/16" up to 65.62 ft;
  - Above 65.62 ft, check with an authorized technician;
- Rigid piping (PPR or Copper pipe) may be used;
- It is recommended to apply a coalescing filter at the equipment inlet.

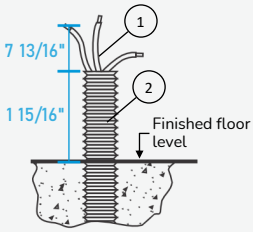
C - WATER



Connect to the water network

- Ø1" PVC pipe for water (2) with Ø3/4" metal threaded sleeve (1);
- The water supply valve must be located close to the equipment and easily accessible to the operator;
- The installation of a particle filter at the equipment's water inlet is recommended.

D - ELECTRICAL

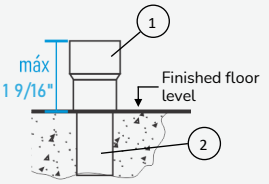


Connect to circuit breaker

- Ø3/4" conduit (2) with 3x 14 AWG wires (1);
- Leave 7 13/16" of wire after the conduit;
- Use the following colors:
  - Green and yellow for ground;
  - Blue for neutral;
  - Black for phase.

NOTE: When connecting phase and phase, use the same color of wire.

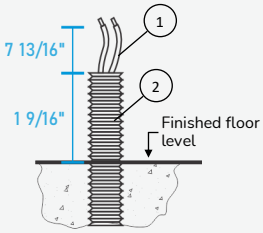
E - VACUUM PUMP (SUCTION)



Connect to vacuum pump room

- PVC pipe Ø1" (2) for water with Ø1/2" metal threaded sleeve (1);
- Do not use 90° elbows or T-type connections. Use long curves and Y-connections to avoid the accumulation of residues in the pipe;
- Before preparing the suction pipe, read the vacuum pump manufacturer's instructions.

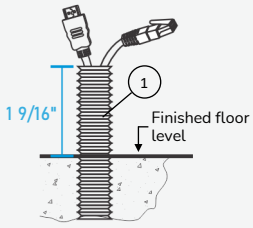
F - VACUUM PUMP (ELECTRIC)



Connect to vacuum pump

- Ø3/4" conduit (2) with 2x 17 AWG wires (1);
- Leave 7 13/16" of wire after the conduit;
- Use black wires;
- Before passing the wires, check the vacuum pump instructions. Some manufacturers specify other colors and quantities of wires.
- Do not use the pump phase for switching in the microswitch.

G - DATA

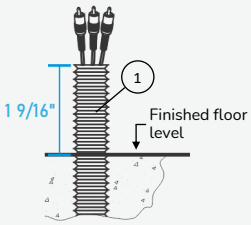


Connect to Media Center*

- Ø3/4" (1) conduit;
- Conduit recommended for connecting USB, HDMI, antenna or network cables, depending on the needs of the office's media center;

* As per the architectural project specifications.

H - PERIPHERALS



Connect to peripheral connection point*

- Ø3/4" conduit (1);
- Conduit recommended for connecting peripheral cables, according to the needs of the office;

* According to project specifications

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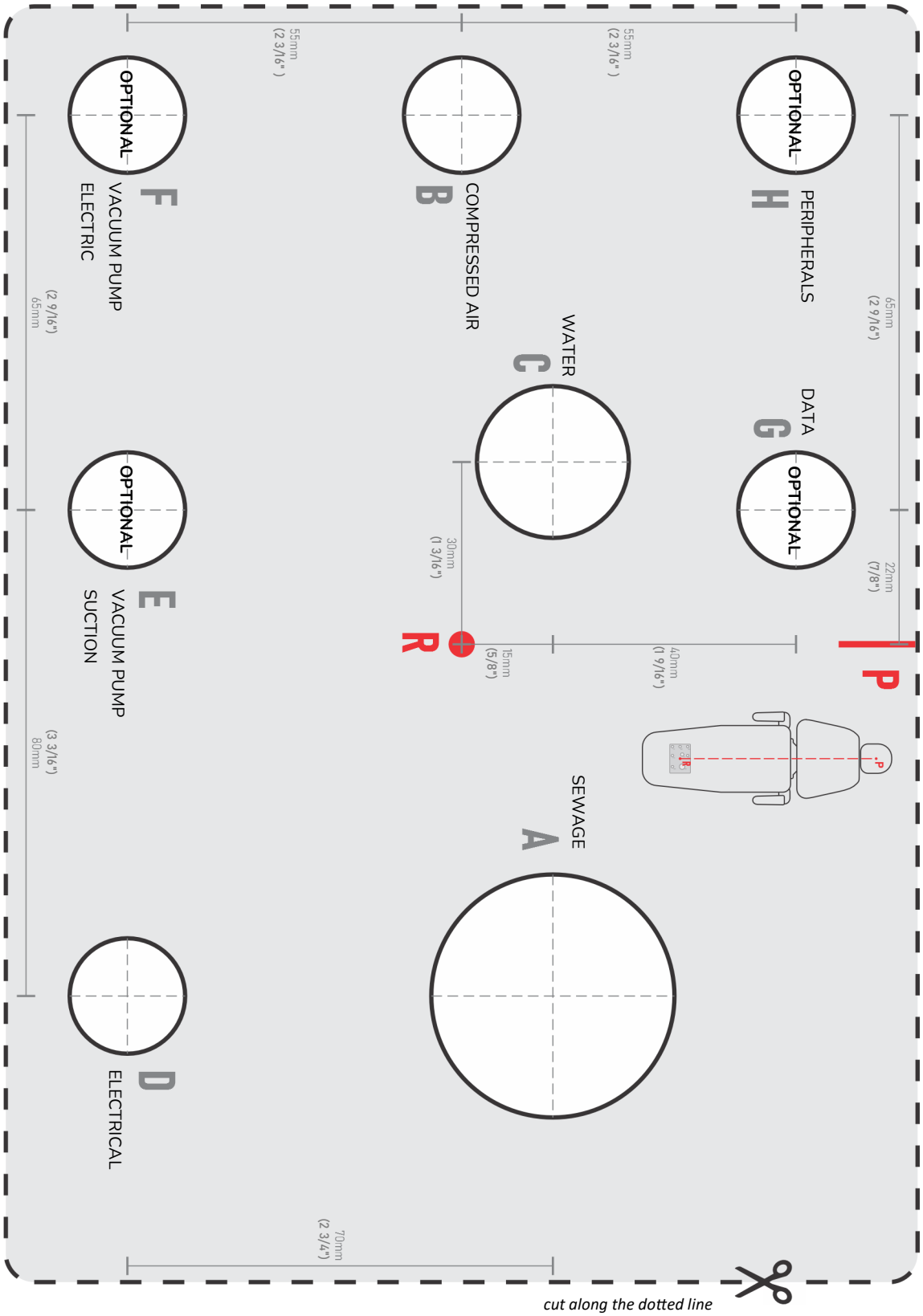
JUNCTION BOX TEMPLATE

(FIGURE 2)

SCALE 1:1 - DIMENSIONS 8 1/4" X 5 7/8" (210 X 150 mm)



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