

Property facilities specifications

The knowledge of the specifications for the property facilities of the dental practice units contributes to their performance and durability. Therefore, before installing your equipment, read this manual carefully. All the information, illustrations and specifications of this manual are based on the information available at the time of publication. We reserve the right to make changes at any time, both to the product and to this Manual, without prior notification.

An authorized Alliage technician, under penalty of losing the guarantee, must carry out the installation of the dental practice units.

The design, sizing and execution of the property facilities must be carried out by specific professionals in accordance with current regulations and legislation.

The specifications contained in this manual are based on the normative guidelines of ABNT.

Dental practice unit positioning

To achieve the best distribution of spaces for the dental practice unit, a place must be chosen such that allows the ergonomic installation of the equipment, so that the professional can obtain ideal conditions of ambience and integration to work, improving his quality and productivity. Therefore, the installation of the equipment must be carried out in accordance with the standards recommended by I.S.O. (International Organization for Standardization) and F.D.I. (International Dental Federation) For analysis of the equipment according to its location in the dental practice unit, I.S.O./F.D.I. they determined to divide the room in few areas. To demarcate these areas, idealize a clock counter, where the center is the axis of the pointers and corresponds to the mouth of the patient lying in the dental chair positioned on the horizontal.

- Around this center, draw three concentric circles, A, B and C of radius 0.5; 1.0; 1.5 meters respectively.

- The patient's head always indicate the 12-hour position. In this way, the axis 6-12 hours, divides the room into two areas: on the dental chair (area of the dentist) and below (area of the assistant).

- The area limited by circle A, 0.5 meters radius, corresponds to the Transfer Zone, where everything that is transferred to the patient's mouth must be located, as are the instruments and the manual parts of the Equipment. In this area should also be located the two bench seats, the dentist and his assistant.

- Circle B of 1.0 meter radius limits the Working Area (maximum range), which can be reached with the movement of the stretched arm. In this area should be the auxiliary tables and the body of the Equipment.

- Circle C of 1.5 meters radius limits the total area of the dental practice unit. Fixed cabinets and vats are located in this area, so when opening the drawers, they must be inside circle B.

Compressed air

The compressed air installations must be free of solid particles, liquids and oil. Size the compressed air network for at least 60 psi and the

maximum without exceeding 80 psi.

Install the compressor near the feed point to avoid losses.

Avoid installing the compressor in sanitary facilities such as bathrooms and lavatories, to minimize air pollution used in dental practice units. Install the air filter as close as possible to the installation point. Install pressure regulating valve with pressure gauge when using compressor with discharge greater than 80 psi or when the clinic has more than one dental practice unit

The compressed air pipes should be sloped from 5% to 10% in the direction of airflow and an automatic drain valve at the lowest point of the pipe.

In the installations, use preferentially rigid copper pipes. The pipes can be executed using other materials: galvanized steel pipes, stainless steel, nylon or polyethylene.

Electricity

Use circuit breaker properly sized to protect the installed equipment. Separate the electrical circuits of the equipment according to their power. Install the dental practice unit, compressor, vacuum pump, x-ray and autoclave on separate circuits.

Ground all the electrical power points of the equipment.

Water

Use only clean, potable water in the dental practice unit.

In the installations, preferentially use PVC pipes. The pipes can also be assembled using galvanized carbon steel and copper pipes.

Install general water register for the dental practice unit.

Install water register for the Vacuum Pump

Sewer

The drainage pipes must have a slope of 2% to 5% in the direction of the drain flow.

Use separate sections for the drainage of the vats and lavatories, the dental chair and the vacuum pump. Connect the drain sections only in a siphoned box.

In siphoned boxes use preferentially blind lid or lattice with closure. In joints use only pieces at 45° to avoid blockages and the correct direction to the drain.

Install in the drainage network, ventilation branch to avoid negative pressure inside the pipe.

Preferentially use rigid PVC pipes.

High Power Suction

Sewer pipes of high power suction should be made preferentially with rigid PVC pipes, with 25mm diameter, joints at 45° and inclination in the flow direction.

The electrical command installations of high power suction must be made in parallel when used in more than one dental practice unit.

Technical specifications for sizing the installations

Equipment	Air consum. l/min	Water consum. l/min	Voltage (V)	Power (VA)
Dental chair	-	-	110 / 127 o 220	350
Venturi	25	-	-	-
Vac Plus	35	-	-	-
Micro motor	50	0,09	-	-
High rotation	35	0,09	-	-
Triple syringe	19	0,13	-	-
X-rays	-	-	127 ou 220	1200
1/2 HP Vacuum Pump	-	0,4	Bi-volt (key)	1220
1 HP Vacuum Pump	-	0,4	Bi-volt (key)	1690
12 L Autoclave	-	(see manual)	Bi-volt (key)	1600
21 L Autoclave	-	(see manual)	Bi-volt (key)	1700
40L Compressor	-	-	127 o 220	830 / 1100
65L Compressor	-	-	127 o 220	1660 / 2200



PRE INSTALLATION MANUAL

PROPERTY FACILITIES SPECIFICATIONS FOR DENTAL PRACTICE UNITS

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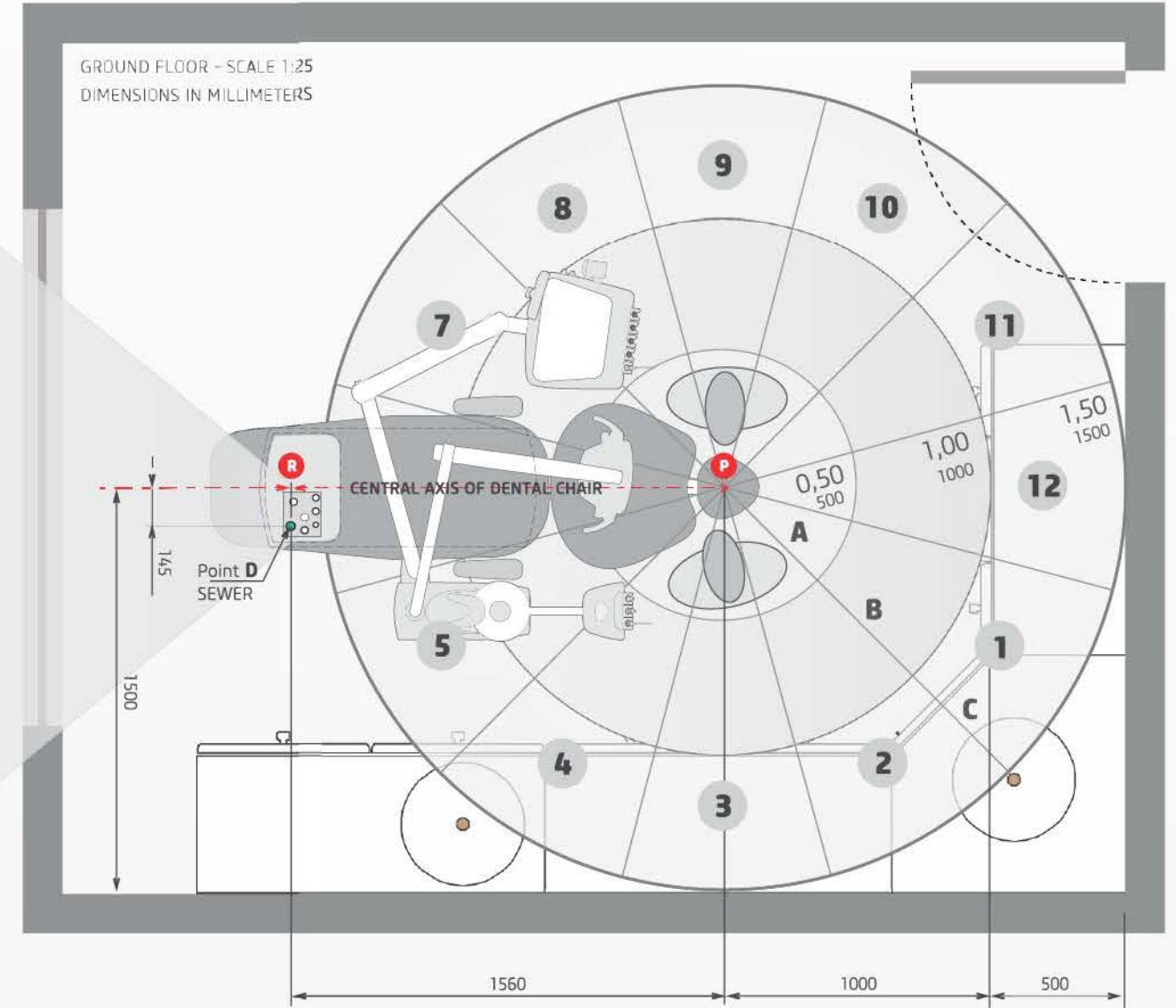
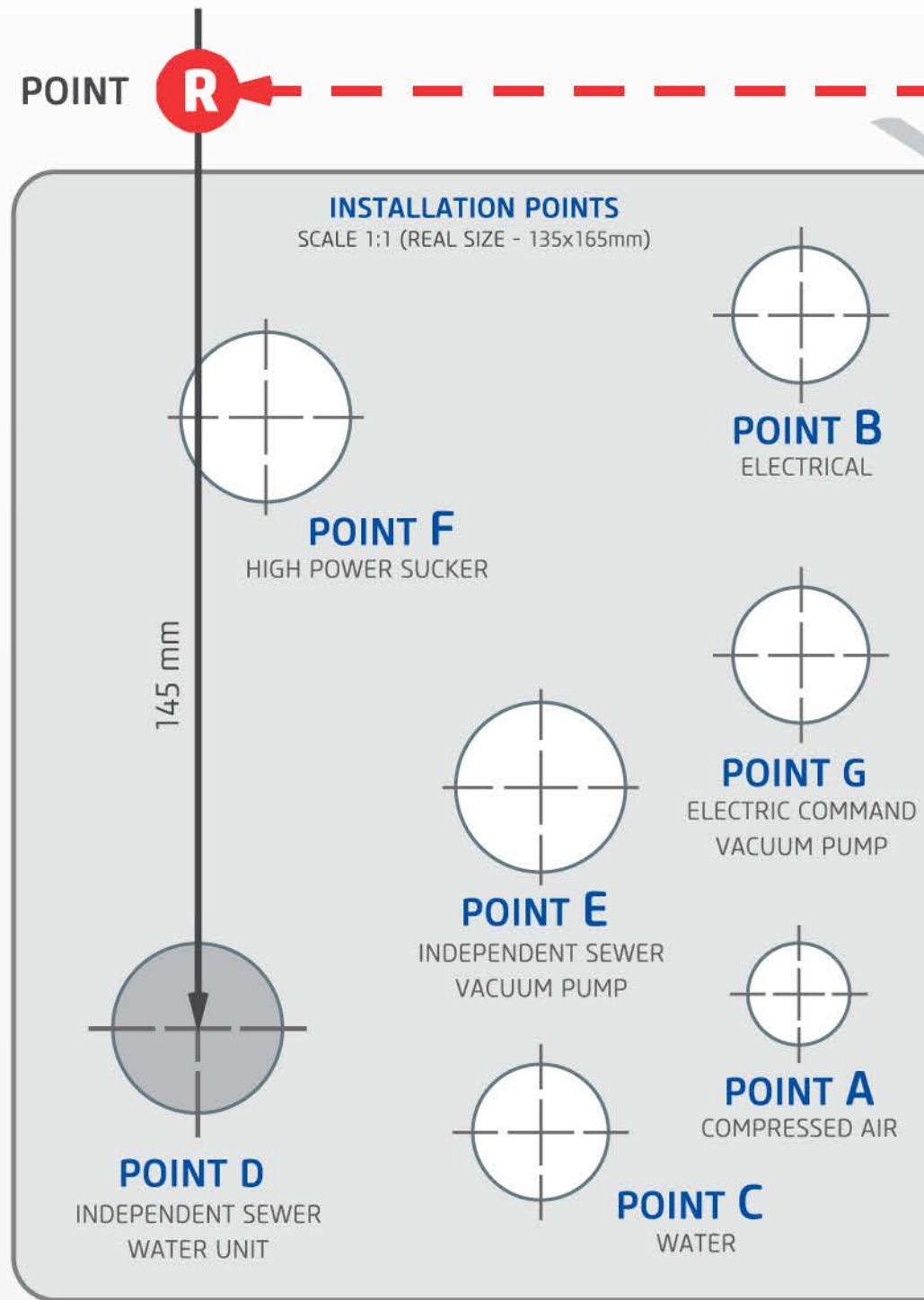
GNATUS

POINT **R**

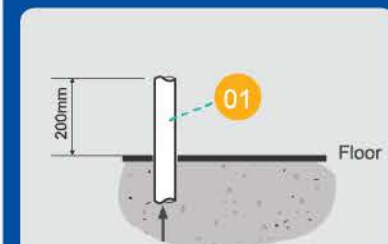
CENTRAL AXIS OF DENTAL CHAIR

DENTAL SET POSITIONING

Consider 1560mm from point **R** up to point **P**
R - Intersection between point **D** and the central axis of the dental chair
P - Head support Work Point

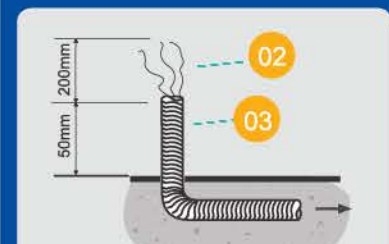


POINT A Compressed air



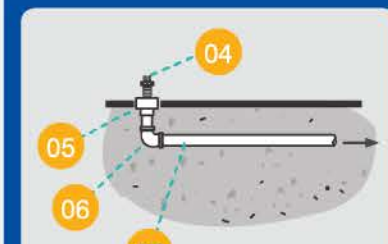
- ↑ Air supply
- 01. Rigid copper tube $\varnothing 1/4"$

POINT B Electricity



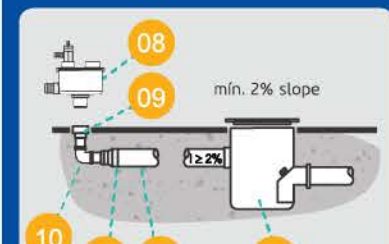
- ➔ Connected to the power network
- 02. 3 cables 2,5mm²
- 03. Corrugated flexible conduit $\varnothing 20$ mm

POINT C Water



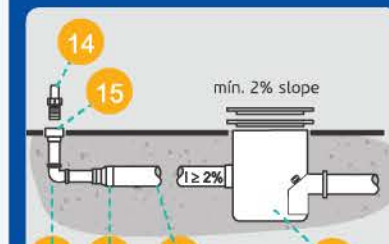
- ➔ Connected to the water network
- 04. Water inlet connection $\varnothing 1/2"$
- 05. Weldable nipple with brass cap $\varnothing 20$ mm x $1/2"$
- 06. Weldable 90° elbow $\varnothing 20$ mm
- 07. Weldable rigid PVC tube $\varnothing 20$ mm

POINT D Independent Sewer for the Water Unit



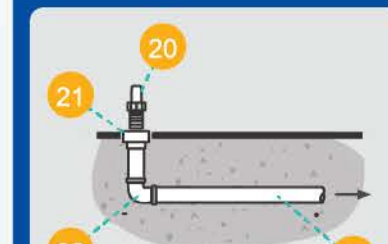
- 08. Buffer
- 09. Weldable nipple with brass cap $\varnothing 25$ mm x $3/4"$
- 10. Weldable 90° elbow $\varnothing 25$ mm
- 11. Long weldable reduction socket
- 12. Weldable rigid PVC tube $\varnothing 40$ mm
- 13. Siphoned box 150x150x50mm

POINT E Independent Sewer for the Vacuum Pump



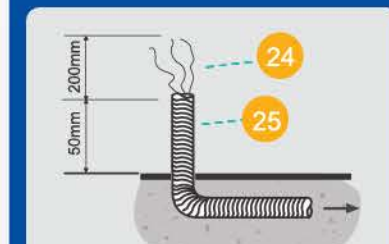
- 14. Hose adapter $\varnothing 3/4"$
- 15. Weldable nipple with brass cap $\varnothing 25$ mm x $3/4"$
- 16. Weldable 90° elbow $\varnothing 25$ mm
- 17. Long reduction weldable socket
- 18. Weldable rigid PVC tube $\varnothing 40$ mm
- 19. Siphoned box 150x150x50mm

POINT F Suction interconnection with the Vacuum Pump



- ➔ Interconnection of points "F" connection box and Vacuum Pump
- 20. Hose adapter $\varnothing 3/4"$
- 21. Weldable nipple with brass cap $\varnothing 25$ mm x $3/4"$
- 22. Weldable 90° elbow $\varnothing 25$ mm
- 23. Weldable rigid PVC tube $\varnothing 25$ mm

POINT G Electrical control of Vacuum Pump suckers



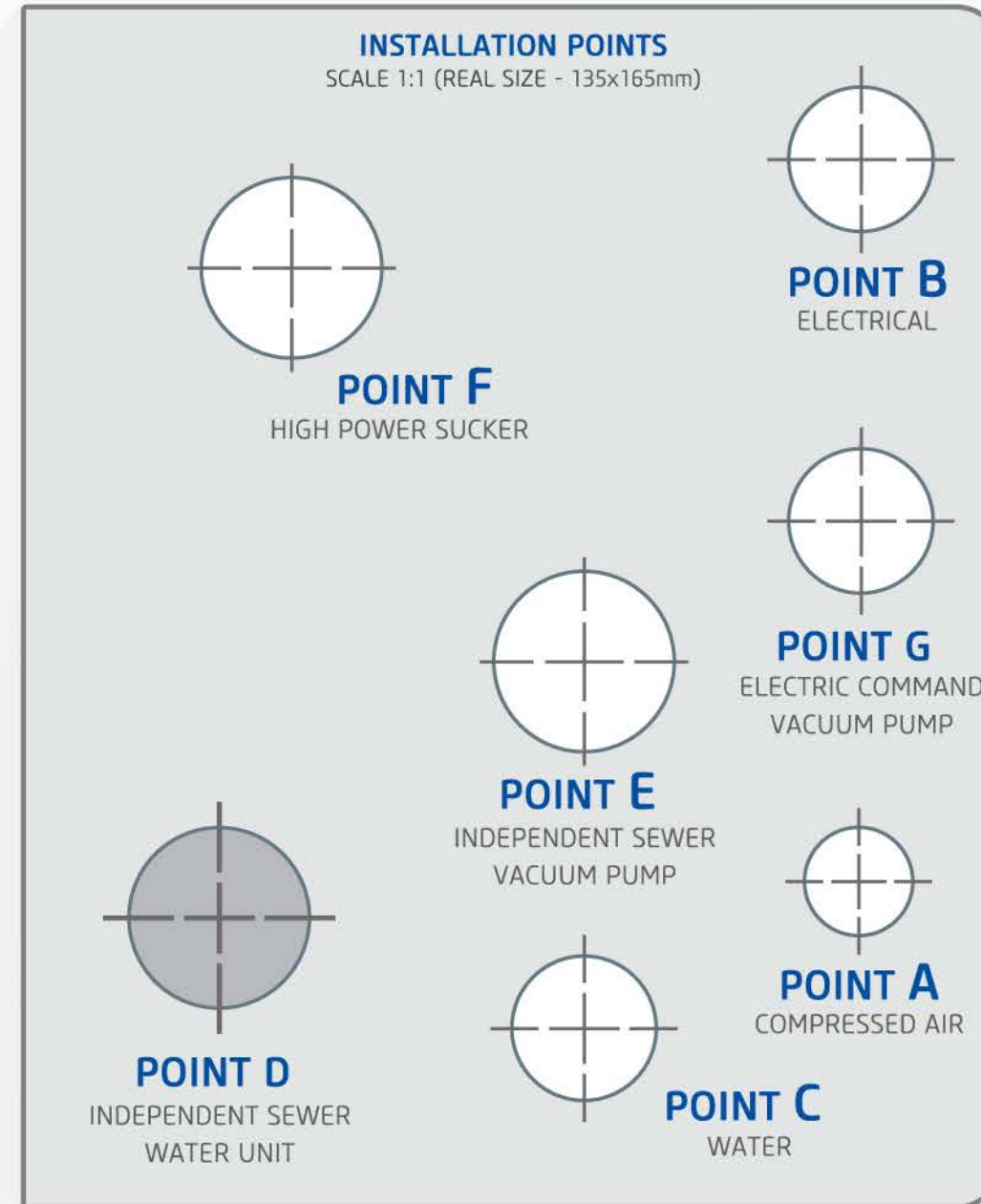
- ➔ Interconnection of points "G" connection box and Vacuum Pump
- 24. 3 cables 0,75mm² (different colors)
- 25. Corrugated flexible conduit $\varnothing 20$ mm

SPARE CONNECTION BOX

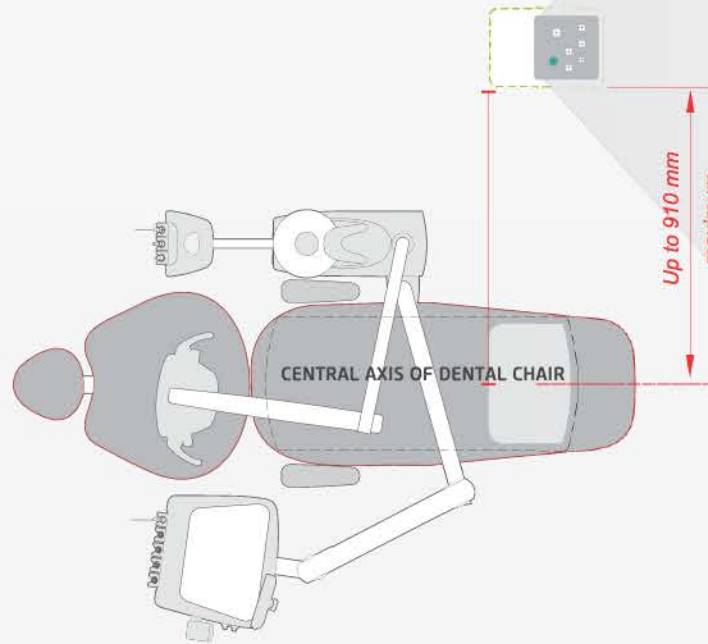
SCALE 1:1 (REAL SIZE-402x280mm)

ATENCIÓN

The dental practice units use an integrated connection box at the base of the dental chair. For installations with standard connection box separated from the base, it is necessary to acquire the kit for loose connection box (sold separately), in this case use this installation pattern.



DISTANCE RECOMMENDED FOR INSTALLATION
WITH SPARE CONNECTIONS BOX



WATER UNIT
OUTPUT

FLEX EQUIPMENT (AIR)
AND WATER UNIT OUTPUT

FLEX EQUIPMENT
OUTPUT (AIR)

PEDAL
OUTPUT

CART EQUIPMENT
OUTPUT