1.00 General

1.01 The dental treatment chair shall be a functional, attractive and comfortable chair for support of the patient. It shall allow maximum accessibility by the doctor or assistant to the patient’s oral cavity.

The dental chair shall comply with the following international regulatory standards: UL60601-1; EN60601-1; CAN/CSA C22.2 NO. 601-1, M90, IEC TYPE B, CLASS I.

Circuit diagrams, component part lists, descriptions, or other information that will assist the user’s technical personnel to carry out repair and replacement of serviceable parts must be available upon request.

1.02 The Chair shall be able to be positioned either independently or in unison at any seat height between 18” and 32” from the floor. While reclining, the seat shall automatically tilt and toe board shall rise to maintain the patient’s legs in a comfortable position. The chair back shall be thin, allowing ample leg room for the practitioner to get in the closest proximity to the patient for improved positioning. The chair shall have a cantilever design.

1.03 Armrest shall swivel 135° to allow easy entry and exit from either side of the chair and be available to the patient at all times. The armrests shall have a detent that keeps them in place to provide the patient maximum support while entering or exiting the chair.

1.04 Headrest shall be adjustable in length to accommodate various heights of the patients. The headrest shall be dual-articulating style with a quick release button that allows adjustment of the headrest. The headrest shall be contoured to provide easy positioning of the patient’s head.

1.05 Chair Upholstery shall be available in either seamless or seamed style.

1.06 Weight of Chair: Shall weigh approximately 360 pounds.

1.07 Overall Chair Dimensions: 28” W x 70-1/4” L

2.00 Operation

2.01 The chair is hydraulically operated, quiet in operation and provides a stable foundation for both the patient and additional dental equipment. It provides mounting capability for right- or left-handed fixed units. The hydraulic system consists of 2 cylinders (one to control lift and another to control tilt) and is sealed to prevent leakage of hydraulic fluid. The system lifts a minimum of 350 pounds without jerking. Potentiometers and electrical switches guarantee repeatable operation when the operator depresses the foot or touchpad switch. Movement rates are controlled by hydraulic control valves, which are set and tested at the factory. The potentiometer can be adjusted in the field to alter factory settings for incline, recline, up and down travel.

2.02 Power to the unit shall be 115 volts or 230 volts. The power is delivered to a microprocessor-controlled printed circuit board. Software in the microprocessor controls the movement of the chair.

2.03 Positioning of the patient shall be by an electronic foot switch or touchpad that is easy to program. It shall be easy to position. The optional touchpad is illustrated with icons that indicate the four positioning functions (incline, recline, chair-up, chair-down). The icons are raised to allow for quick location and good tactile feel. It is sealed to prevent contamination from liquids or dust.

2.04 The chair swivels a minimum of 30° from the center of the chair and has a brake that can be hand activated to lock the chair in position.

2.05 The chair shall come from the factory with two, pre-programmed auto-positions. The auto buttons are labeled “0” and “1”. Other positions can be programmed as desired.

2.06 Either the touchpad or the foot switch can be used to bring patients to an upright position for consultation, rinsing or impression making and then returned to the previously pre-programmed operating position.

2.07 Strategically located safety switches stop the automatic chair down-positioning activity if the truss mechanism encounters an obstacle. The doctor can also stop the chair movement by activating any of the icons that trigger chair movement.
3.00 Construction

3.01 The chair shall be primarily of metal construction. No low-grade structural materials are used. The chair shall have a cantilever design and a positive rotational-lock, which allows 30° rotation about the center line of the chair.

3.02 The Base Plate shall be made of approximately 1/2 inch steel. Base plate finish shall be powder coated with an iron phosphate pretreatment, polyester powder coat dark gray.

3.03 The Truss shall be made of cast iron and house the lift cylinder.

3.04 The Hydraulic Lift Mechanism shall have two cylinders located in the lower and upper structures of the chair. When the foot switch is activated for lifting chair, the cylinder located in the lower portion of the chair shall lift or lower the chair. When the foot switch is activated for recline or incline, the cylinder located in the upper portion shall recline or incline. When the foot switch is programmed for dual chair activation, the chair will lift and recline simultaneously.

3.05 The Back shall be made of steel. The recline mechanism is located in the seat, and operates through a linkage. The linkage shall connect to the lower center portion of the back frame. Centered in the back shall be a track mechanism that supports the headrest glide bar that slides up and down for headrest positioning.

3.06 The Upper Structure shall be made of cast iron, approximately 3/8” thick. The toe board frame is supported by the Upper Structure and is mounted to the linkage that supports the recline mechanism.

3.07 The Arm Support shall be made of aluminum casting, approximately 3/8” thick depending on the radius. It shall be attached to the upper structure of the chair and support the back.

3.08 The Armrest shall be constructed of steel, over-molded with rubber. The armrest swings to three separate positions with a ball detent system that rotates on a bronze bearing.

3.09 The Electrical Control Package electrical functions shall be controlled by components on the control package. Limit function and safety switches shall operate at low voltages as supplied by an energy limited transformer. Line voltage motor switching shall be performed by solid state components which have no moving parts. The entire electronic package may be easily removed for maintenance or exchange.

3.10 The Foot Switch Control shall consist of a hard rubber cover embossed to show the functions. This cover and the base material protect the electronics needed to communicate to the electrical control package. The foot control is connected by wire to the chair.

3.11 The Power Input shall operate on 115 or 230 volts, single phase, 50 / 60 hz. Power is supplied to the chair by a non-detachable power cord or appliance coupler with a protective earth ground.

3.12 The Upholstery shall be made of substrate, foam and leather-like material. All cushions shall be easily removed and replaced. A headrest pillow shall provide positive support for the patient’s head.

3.13 The Pump Covers shall be made of ABS with fire retardant coating or molded of a similar fire retardant material.
Technical Dimension Data

Manually position the chair to the desired working position.

Press and hold the “Learn” button and double tap the “1” button, then listen for one quick beep to confirm the position has been stored.

Return the chair to the “0” or exit position. Press the “1” button and confirm the position has been correctly programmed.

Programming the “0” Position
The exit or “0” position can be reprogrammed to the desired position in the same manner as above.