



EITEL-McCULLOUGH, INC.
SAN CARLOS, CALIFORNIA

SK-500

AIR-SYSTEM SOCKET

AND CHIMNEY

The SK-500 Air-System Socket is the recommended socket for use with the 4-1000A tetrode, and it may be used as well with any other tubes having the same physical dimensions. The SK-500 provides efficient connection between the tube and its external circuits, acts as a firm mechanical support for the tube, and controls the flow of cooling air around the tube envelope.

The SK-500 Air-System Socket consists of a cast aluminum body, which supports the electrical insulation for the terminals and acts as an air-duct to guide the air flow into the base of the tube. The air passes through the base of the tube and is guided past the tube envelope and plate seal by the glass Air Chimney, SK-506.

Most applications of the SK-500 Air-System Socket require the use of the SK-506 Air Chimney to guide the air over the envelope of the tube and past the plate seal. The SK-506 Air Chimney may be omitted only in the few special cases where other definite provisions for cooling the tube envelope and plate seal have been made.

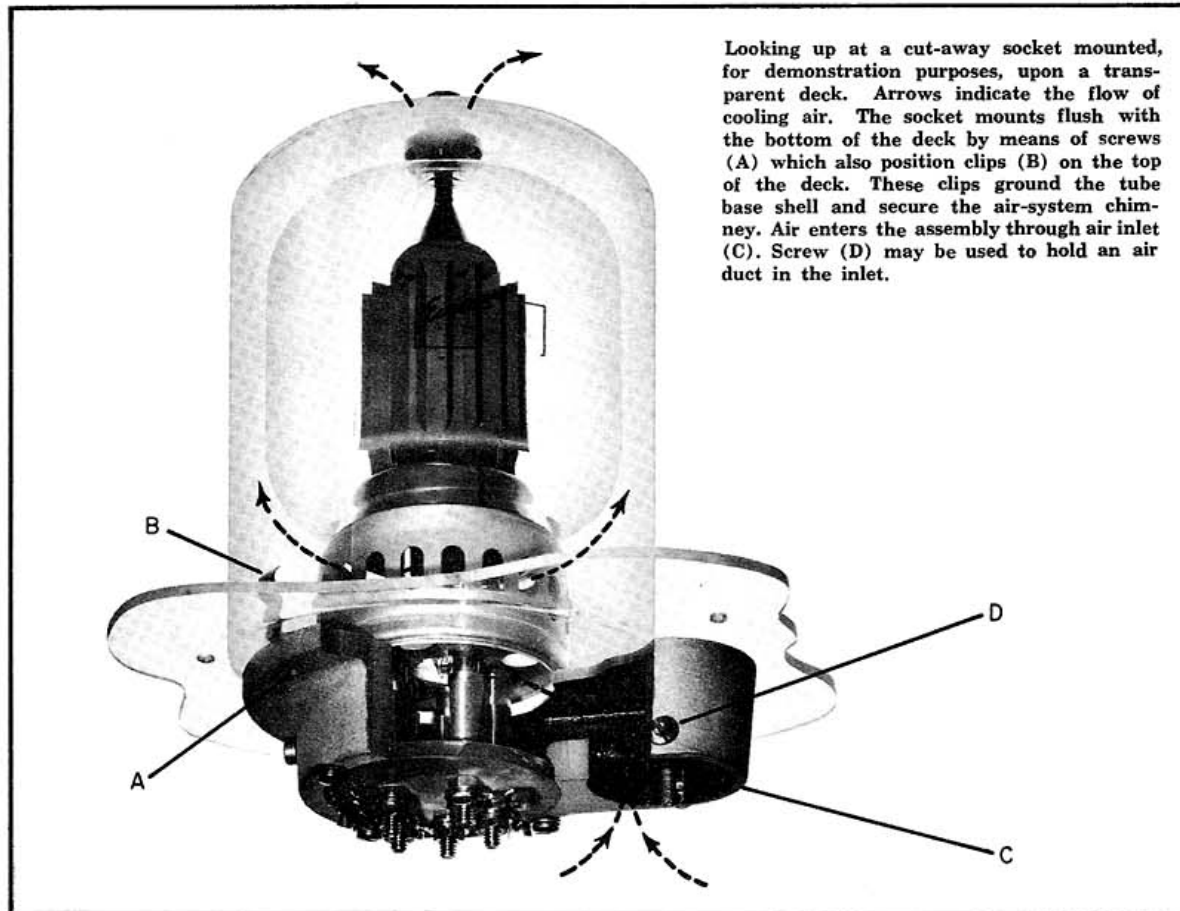
The electrical insulation for the connecting jacks and their terminals is a disk of low-loss insulating material, resting on a shoulder turned into the bottom of the socket body. The insulating disk is held in place by four machine screws which act as clamps. The design permits the insulation and terminal assembly to be rotated to any convenient direction and clamped firmly in place, so no compromise with wiring requirements will have to be made when the socket is installed.

An air blower must be connected to the socket air-inlet. This can be done by means of a duct terminating in a cylindrical fitting of two inches O.D., or the chassis may be enclosed and connected to the blower. In either case the pressure drops and corresponding flow-rates will depend upon the tube type, power level, operating frequency and ambient conditions, and must be obtained from the data sheet for the specific tube type being used.

Socket air pressure can be measured conveniently by a manometer arranged to indicate the pressure difference between the air in the socket and the air in its surroundings. To facilitate and standardize this measurement, $\frac{1}{4}$ -28-threaded hole is provided in the wall of the socket body opposite the air inlet. A probe or fitting can be screwed into this hole for connection to a manometer; it should be screwed into the socket until its end is flush with the inner wall of the socket base. It should not be permitted to protrude inside the inner surface of the socket wall.

The SK-500 Air-System Socket is designed for under-chassis mounting and requires a $3\frac{3}{4}$ -inch diameter hole through the chassis deck. The socket is fastened in place by four No. 10 32 machine screws, running in tapped holes in the cast aluminum body. These four screws also hold four small, double clips, which serve to ground the metal base of the tube and to hold the SK-506 Air Chimney in place.

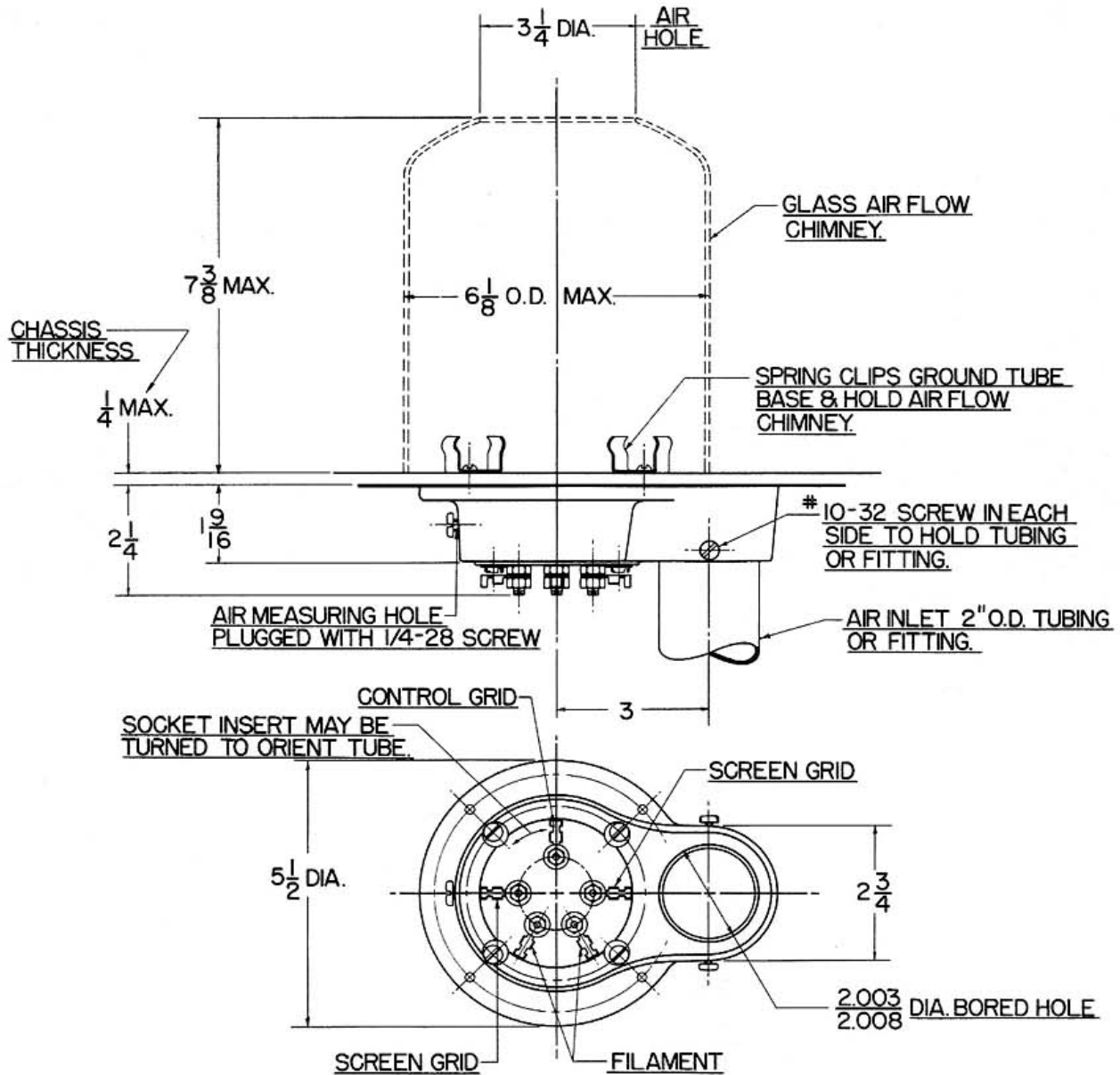
When a tube is inserted in the socket, the five pins on the tube are engaged by five self-aligning pin-jacks in the socket. The connecting leads to the socket must be sufficiently flexible to permit free movement of the pin-jacks, or the self-aligning feature may be impaired.



Looking up at a cut-away socket mounted, for demonstration purposes, upon a transparent deck. Arrows indicate the flow of cooling air. The socket mounts flush with the bottom of the deck by means of screws (A) which also position clips (B) on the top of the deck. These clips ground the tube base shell and secure the air-system chimney. Air enters the assembly through air inlet (C). Screw (D) may be used to hold an air duct in the inlet.



SK-500 Air-System Socket



*10-32 MACHINE SCREWS MOUNT SPRING CLIPS & SOCKET ON CHASSIS.

