

WESTINGHOUSE

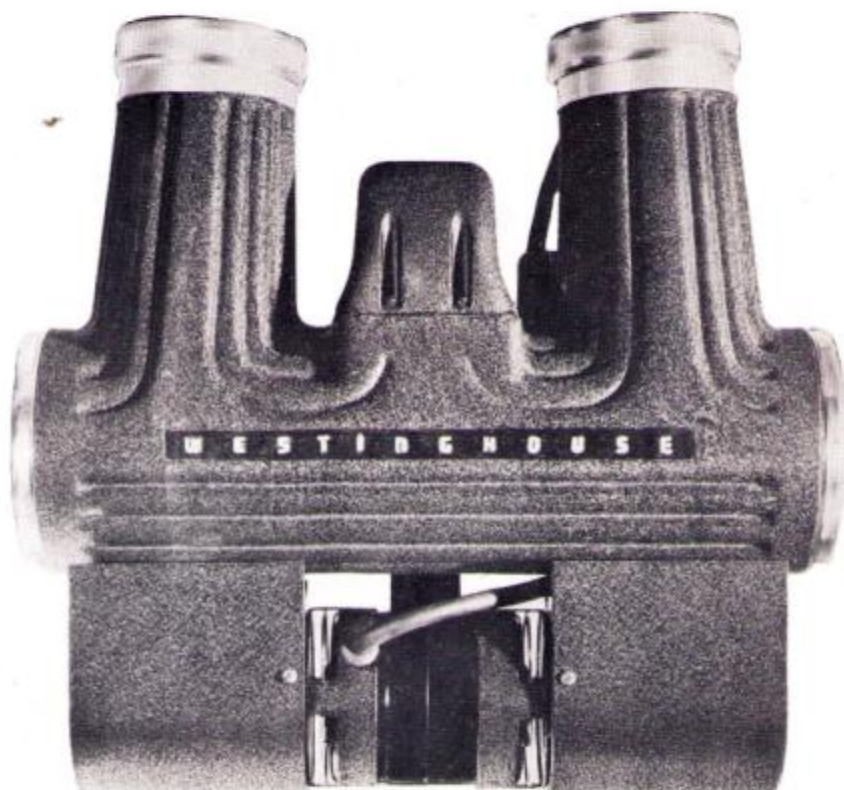


X-RAY TUBES

**SHOCKPROOF, OIL INSULATED 110 KV
RADIOGRAPHIC X-RAY TUBE HEAD**

For

TUBE TYPES WL5519, 5520, 5521, 5522 & 5523



VOLTAGE RATINGS

FULL WAVE RECTIFIED.....	110 KVP
HALF WAVE RECTIFIED.....	100 KVP
SELF RECTIFIED.....	90 KVP USEFUL, 100 KVP INVERSE

APPLICATION

The Westinghouse oil insulated 110 KV Radiographic x-ray tube head represents an advance in design providing heat dissipation ratings much greater than have heretofore been available in

small, lightweight, shockproof heads. This head will meet the requirements of the busy ray departments for radiography, fluoroscopy superficial therapy to 110 kvp.

SPECIFICATIONS

INSERT TUBES:

For a complete description of available insert tubes see bulletin AXR 16.

RATING DATA:

RADIOGRAPHY:

Short time ratings given in bulletin AXR 16.

FLUOROSCOPY & THERAPY:

Without Air Circulator	KVP	Room Temperature	
		80° F	100° F
Continuous	85	2.5	2.0
	110	2.0	1.5
Intermittent	85	5.0	4.5
	110	4.0	3.5

A cold tube may be operated at the intermittent ratings for 30 minutes continuously. After that the same loadings may be applied an indefinite number of times using equal off and on periods of 10 minutes or less.

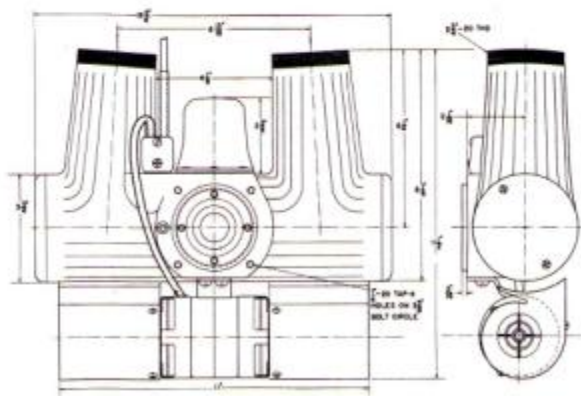
With Air Circulator	KVP	Room Temperature	
		80° F	100° F
Continuous	85	6.5	5.5
	110	5.0	4.25
Intermittent	85	10.0	9.0
	110	7.75	7.0

Intermittent ratings follow note on top chart except that first period is 20 minutes and on and off periods are 15 minutes.

EQUIVALENT HEAD HEAT CAPACITY:

Without Air Circulator 750,000 H.U.

With Air Circulator 1,000,000 H.U.



GENERAL DESIGN INFORMATION

HOUSING:

Made of cast aluminum lined with lead 1.5 mm thick for x-ray protection. Insulation provided by high dielectric oil. Quality of oil is insured by vacuum filling and sealing of head. Provision is made to accommodate oil expansion under all operating conditions. Light in weight and readily installed on most tube stands by means of conventional flange or trunnion designed to permit easy angulation. Exceptionally high heat dissipation provided by integral oil pump described in next paragraph.

OIL PUMP:

The forced oil anode cooling system built integral with the head permits higher than usual continuous ratings. For routine work in a department handling a variety of radiography and superficial therapy, limitations imposed by head heat capacity are seldom, if ever, encountered. Positive delivery of approximately 1/2 gallon of oil per minute to cool the anode also insures uniformity of temperatures throughout the head thus making ratings independent of head position. The pump itself is mounted between the arms of the head where it is accessible yet unobtrusive. A 110 volt AC line is required to drive the pump and is also used for the air circulator when one is employed.

AIR CIRCULATOR:

An efficient air circulator is available as optional equipment. Its use increases the heat dissipation of the head so that head heat capacity need no longer be considered as a limitation in applying rated loads.

CABLES:

Energy is supplied to the tube by flexible, shock-proof, grounded-shield cables equipped with plug-in type fittings to facilitate service work in the field. The cables and fittings are designed to render long, trouble-free service to the user.

WEIGHT:

To be counterbalanced with cables
in position 22.5 lbs.
With air circulator 26.5 lbs.

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