



MAGNETRON TUBE

TYPE: 2M13

GENERAL DESCRIPTION

The 2M13 is a fixed frequency microwave oscillator in the 2420 to 2480MHz region, with an average power output of 5000W, designed to operate on a 3-phase bridge rectified anode supply using the high voltage transformer, with or without a smoothing choke.

The electro magnet may be energized by a separate supply or may be connected in series with the high voltage source. For anode cooling, use water and for cathode bushing cooling, use forced-air. The tube is designed for industrial heating applications.

GENERAL CHARACTERISTICS

ELECTRICAL

Heater Voltage	.....	7 V
Heater Current	.....	56 A
Preheat Time	.....	10 sec.

MAXIMUM RATINGS

Heater Voltage	.....	7V $\pm 5\%$
Peak Anode Current	.....	1.7 A
Average Anode Current	.....	1.3 A
Anode Temperature	.....	100°C
V.S.W.R.	.....	3/1

TYPICAL OPERATION

Heater Voltage (Operation)	....	6 V
Peak Anode Voltage	.....	7 KV
Average Anode Current	.....	1.1 A
Average Power Output (VSWR: 1.1)	.....	5 KW
Frequency	.....	2450 MHz

MECHANICAL

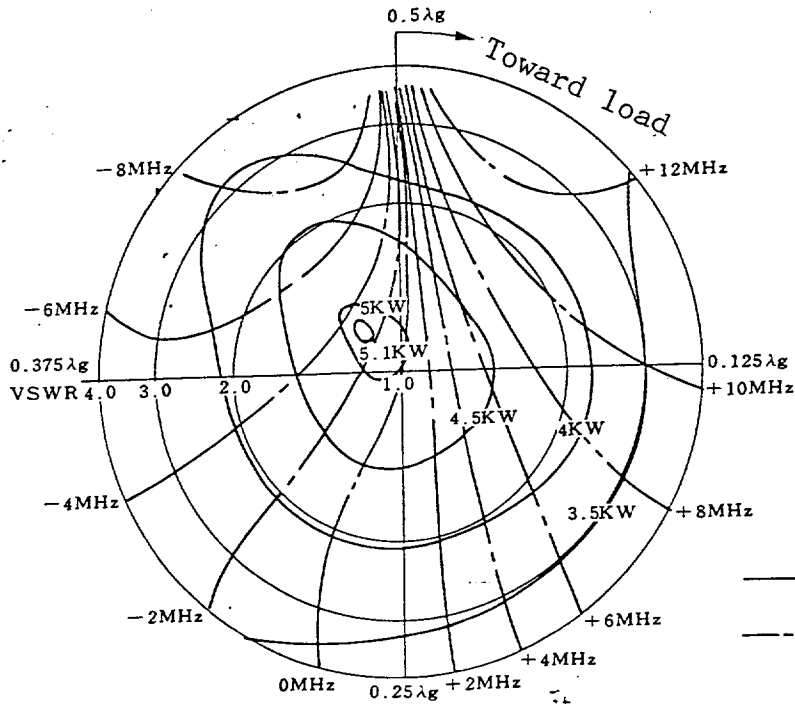
Mounting Position	.....	Cathode Axis Vertical with input bushing up.
Net Weight	.....	1 KG
Overall Dimensions	.....	As per Drawing
Cooling Anode Cathode Bushing	..	Forced Air Cooled

*New Japan Radio Co., Ltd.*

5TH. MORI BUILDING 17-1, TORANOMON 1-CHOME MINATO-KU, TOKYO 105 JAPAN  
PHONE TOKYO (03) 591-3451 CABIF ADDRESS NEW JRC TOKYO TELFX-272-6151 N. CTY J

2M13 RIEKE DIAGRAM

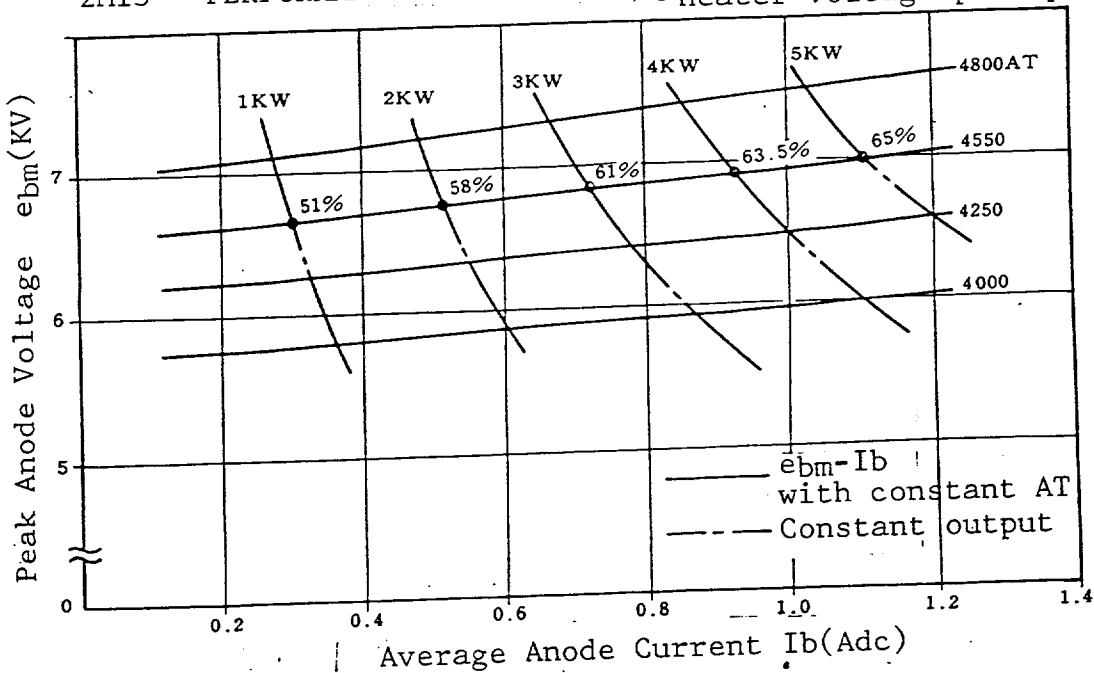
Operating Condition  
 e<sub>bm</sub> : 7.0KV  
 I<sub>b</sub> : 1.1Adc  
 f<sub>o</sub> : 2450MHz  
 E<sub>f</sub> : 6.0V



— Constant Power  
 --- Constant Frequency

2M13 PERFORMANCE CHART

Load V.S.W.R. 1.1 : 1  
 Heater voltage per specified value.

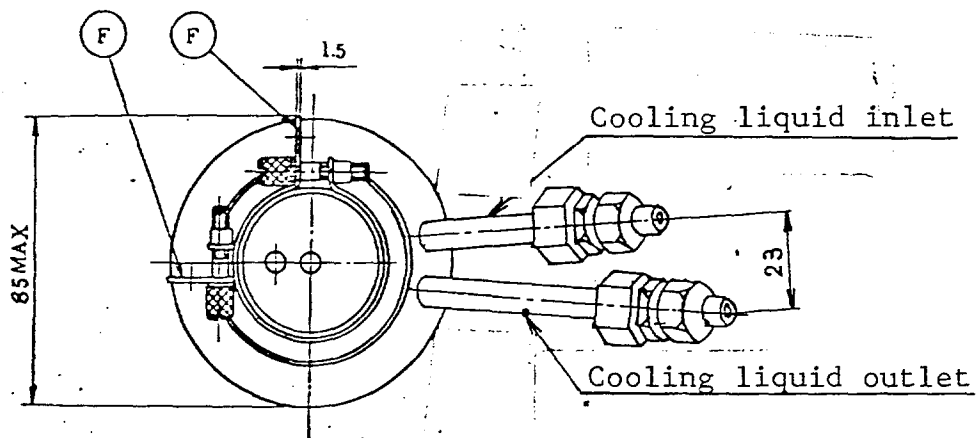
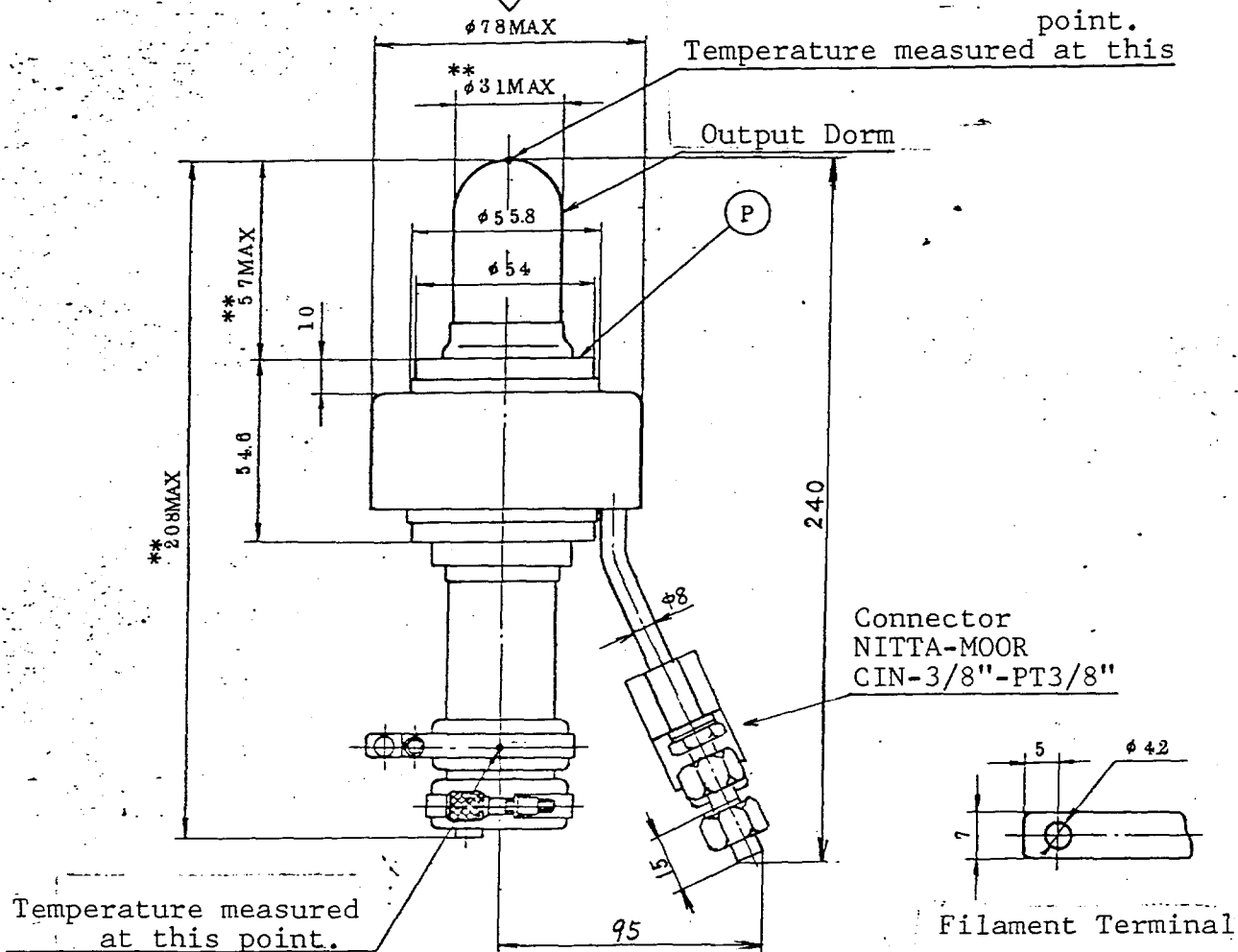


2 M 1 3

Unit: mm

OUTLINE DRAWING

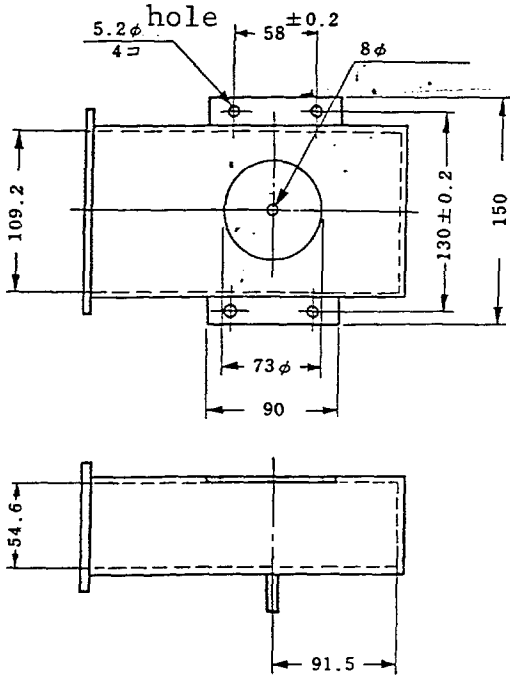
Direction of Cooling Air Flow



# 2M13

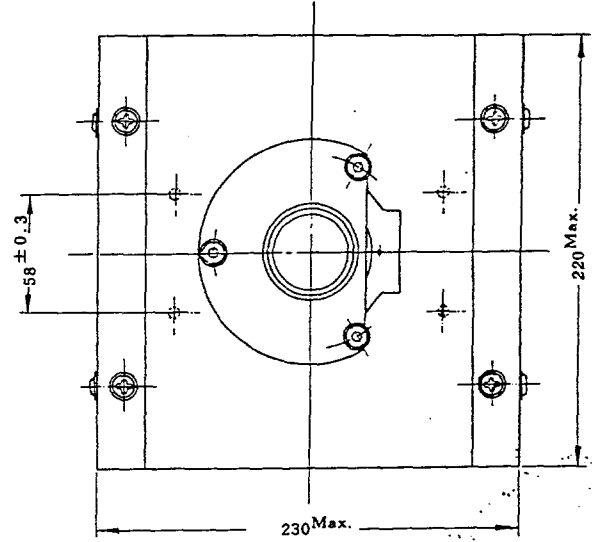
## WAVEGUIDE LAUNCHING SECTION

Unit : mm

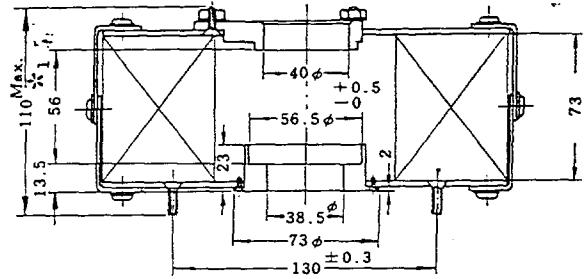


## ELECTRO MAGNET

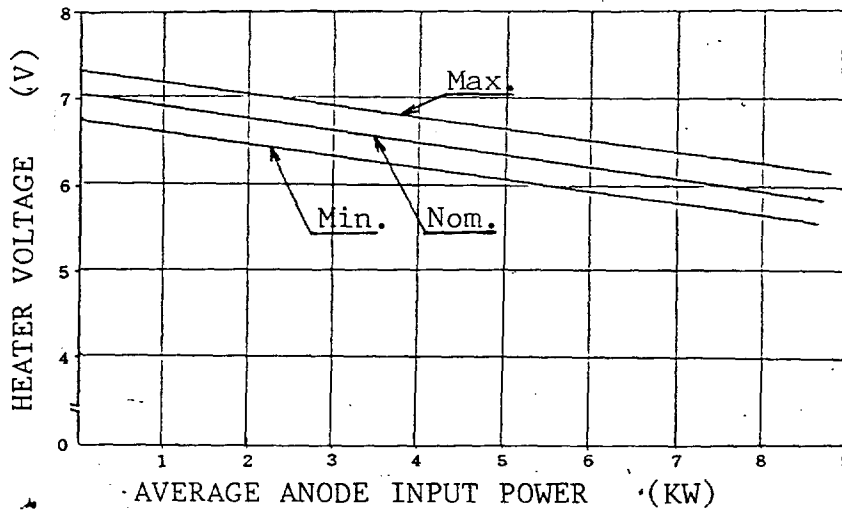
Unit : mm



\* 1. Adjustable  $\pm 2$

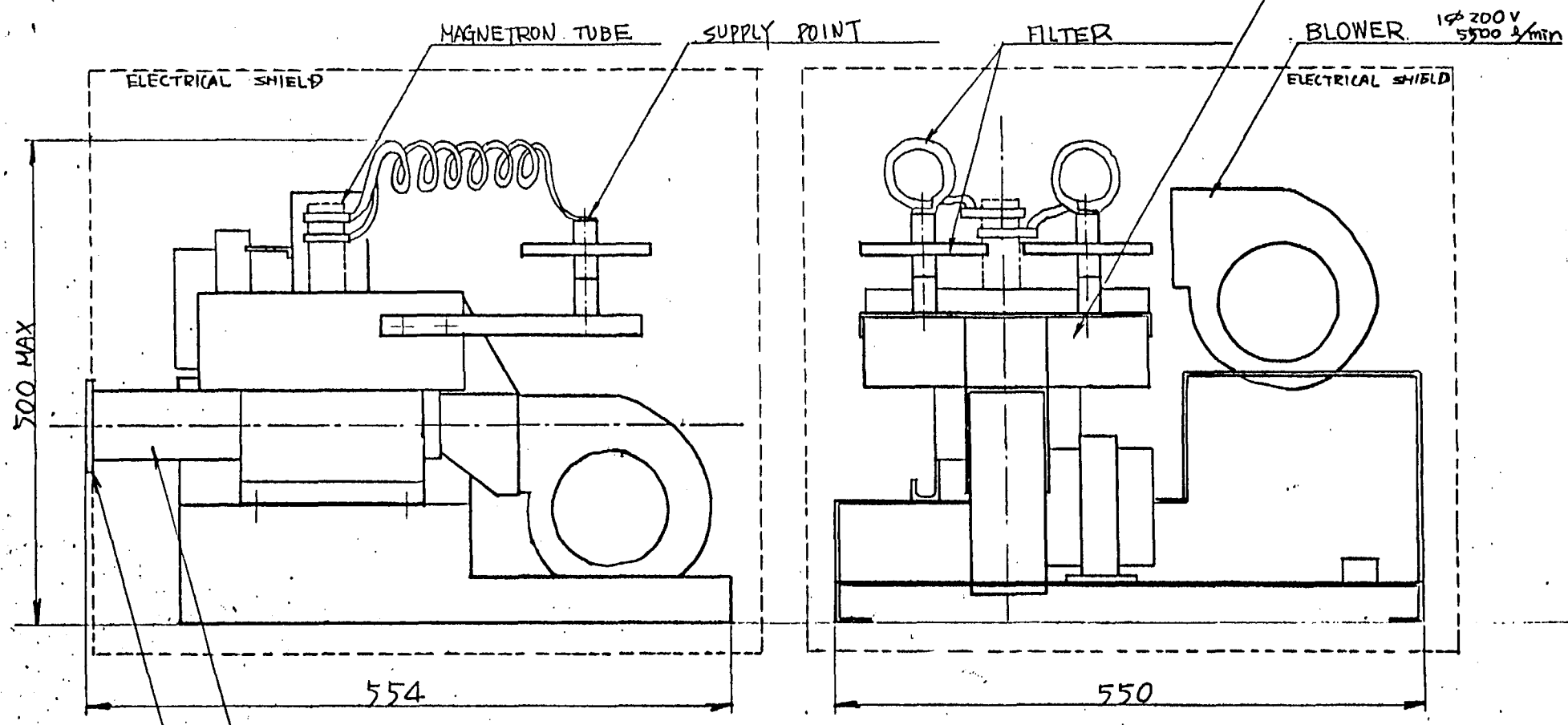


## HEATER VOLTAGE REDUCE CURVE



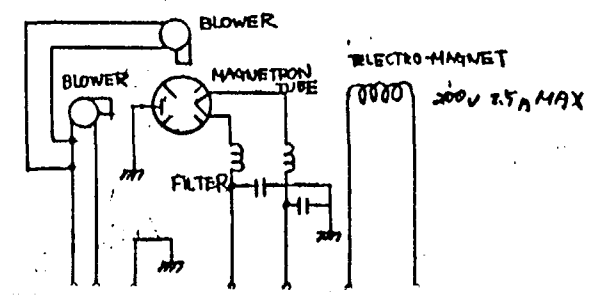
DRAWING TO SET MAGNETRON TUBE

UNIT: mm



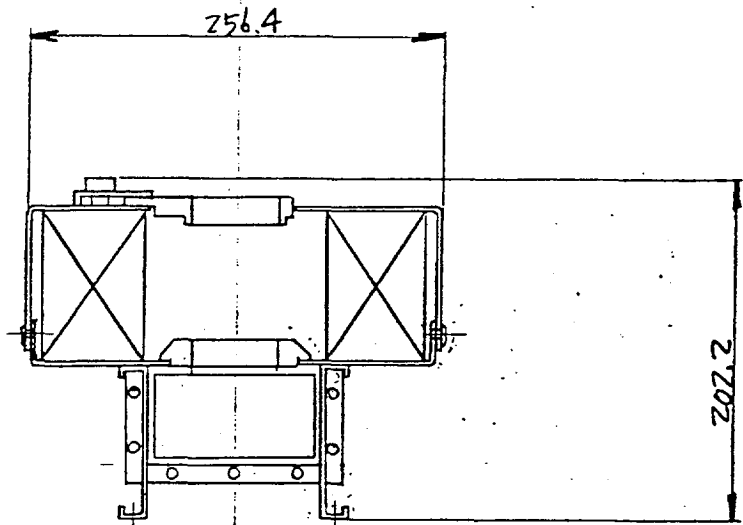
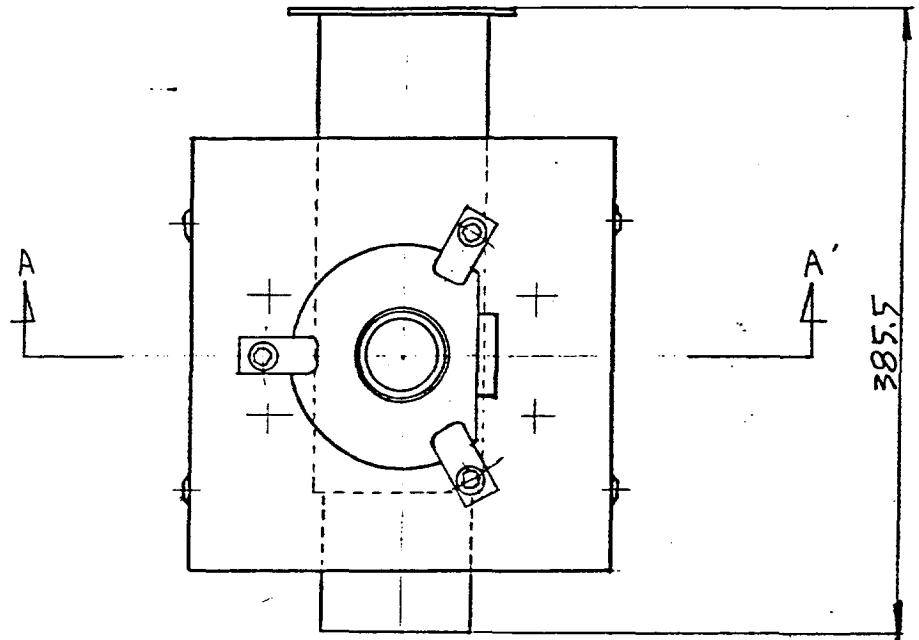
FLANGE: UG-435A/U

CIRCUIT OF THIS DRAWING



WAVEGUIDE LAUNCHING SECTION  
(FOR 6.5KW OPERATION)

UNIT : mm



SECTION A-A'