



# NATIONAL

## NL10250-17

Description: Continuous wave magnetron, 2450 MHz, fixed frequency.

### ABSOLUTE MAXIMUM RATINGS:

ITEM	SYMBOL	MIN	MAX	UNIT	NOTE
Filament Surge Current	-	-	100	Aac	
Filament Voltage,Stand-by	Ef	4.40	5.00	Vac	
Filament Voltage,Operation	Ef	(See Fig.1)		Vac	1,2
Pre-heating Time	Tk	5	-	sec	1,3
Peak Anode Voltage	ebm	-	4.3	KVp	1
Peak Anode Current	ibm	-	2.1	Ap	1
Average Anode Current	Ib	-	750	mAdc	1
Average Anode Input	Pi	-	2.6	Kw	1
Load VSWR	$\sigma$ L	-	4	-	1,5
Anode Core Temperature	Tp	-	180	C	
Case Temperature	Tcase	-	120	C	
Storage Temperature	-	-30	60	C	

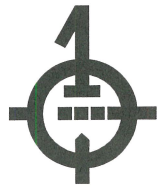
### TEST CONDITIONS FOR ELECTRICAL CHARACTERISTICS:

Filament Voltage	Ef = 4.6 V (stand-by),	Ef = 3.4 V (operation)
Average Anode Current	Ib = 725 mAdc	
Load VSWR	$\sigma$ L = 1.1 or less	
Cooling Water Flow	See graph	
Temperature at inlet	25 °C	

### LIMITS AND CHARACTERISTICS:

ITEM	CONDITIONS	SYMBOL	BOGIE	MIN	MAX	UNIT	NOTE
Filament Current,Stand-by	tk=120secMin	If	20	18.5	21.5	Aac	1,
Peak Anode Voltage		ebm	4.00	3.85	4.20	kVp	1,8
Average Power Output		Po	2000	1750	-	W	1,8
Frequency		fo	2445	2435	2455	Mhz	1,8
Stability	$\sigma$ L=3 or less	ST	-	700	-	mAdc	1,4,6
Breakdown Voltage		Et	-	10	-	kVdc	7

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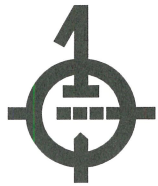
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### NOTES:

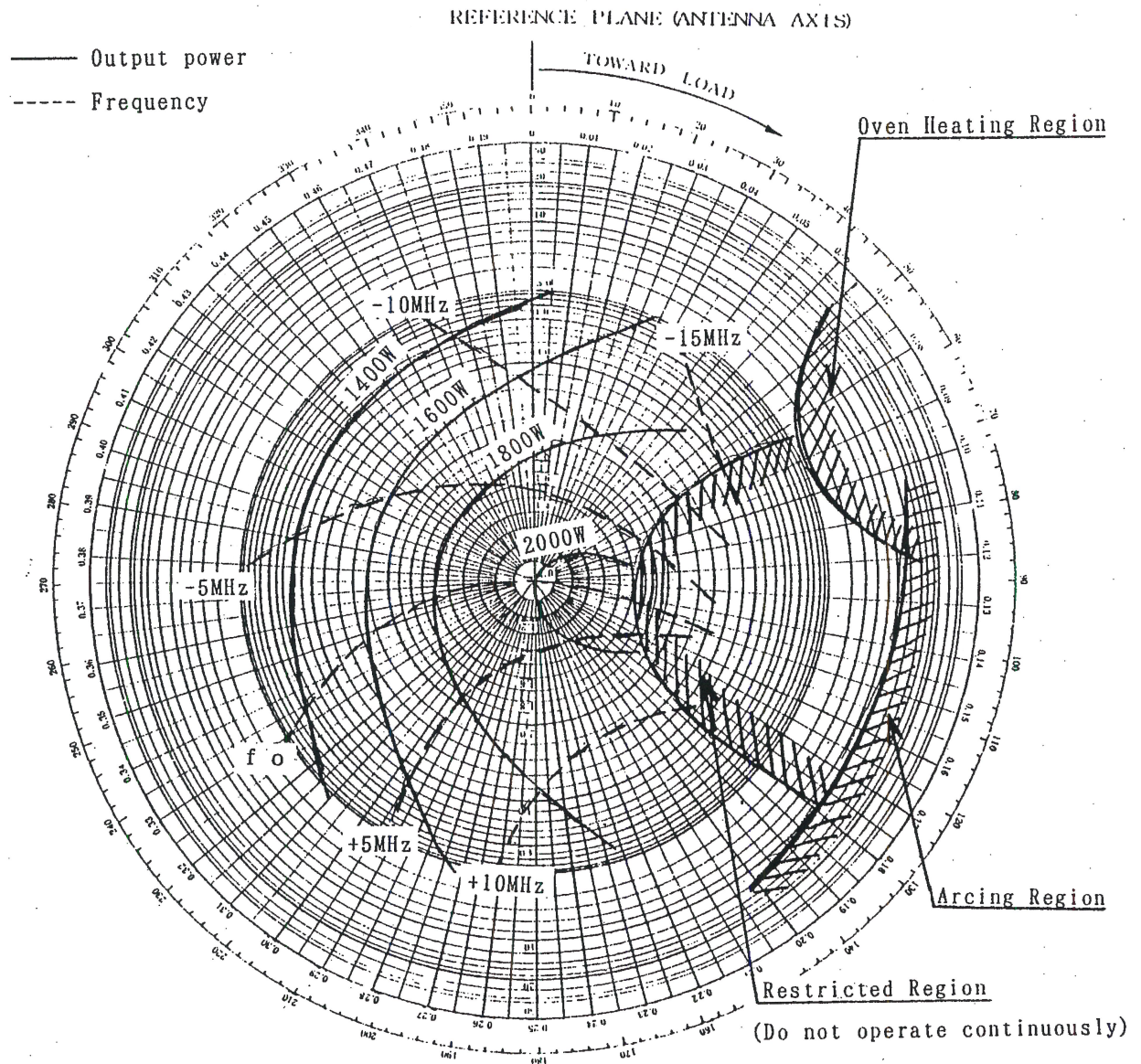
1. Power supply should be single-phase, full-wave rectifier without filter.
2. Filament voltage should be regulated as shown in Fig.1.
3. To apply to single phase full-wave rectifier without filter. If power supply is different, the figure shall be reviewed.
4. Any instability such as mode jump, run away, should not be observed at any phase of the specified VSWR.
5. The load impedance should be kept outside the region on the Reike Diagram
6. Operate momentarily 5 sec maximum to avoid destruction of tube.
7. No continuous spark at 10 kVdc after gradual voltage up.  
(RL = 100K ohms. Potential of anode shall be plus)
8. Figures specified at 20+/- 1°C of the magnets' temperature.  
If the magnets' temperature is T °C, ebm (T), Po(T) and fo shall be:  
$$\text{ebm (T)} = \{ 1 - 0.002 (T - 20) \} \text{ ebm}$$
$$\text{Po (T)} = \{ 1 - 0.002 (T - 20) \} \text{ Po}$$
$$\text{fo (T)} = \text{fo}$$
Measurements shall be done within 15 seconds after ebm is supplied.

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Operating Conditions :

Power Supply : Single phase, fullwave rectifier  
without filter

Average Anode Current = 700 mA

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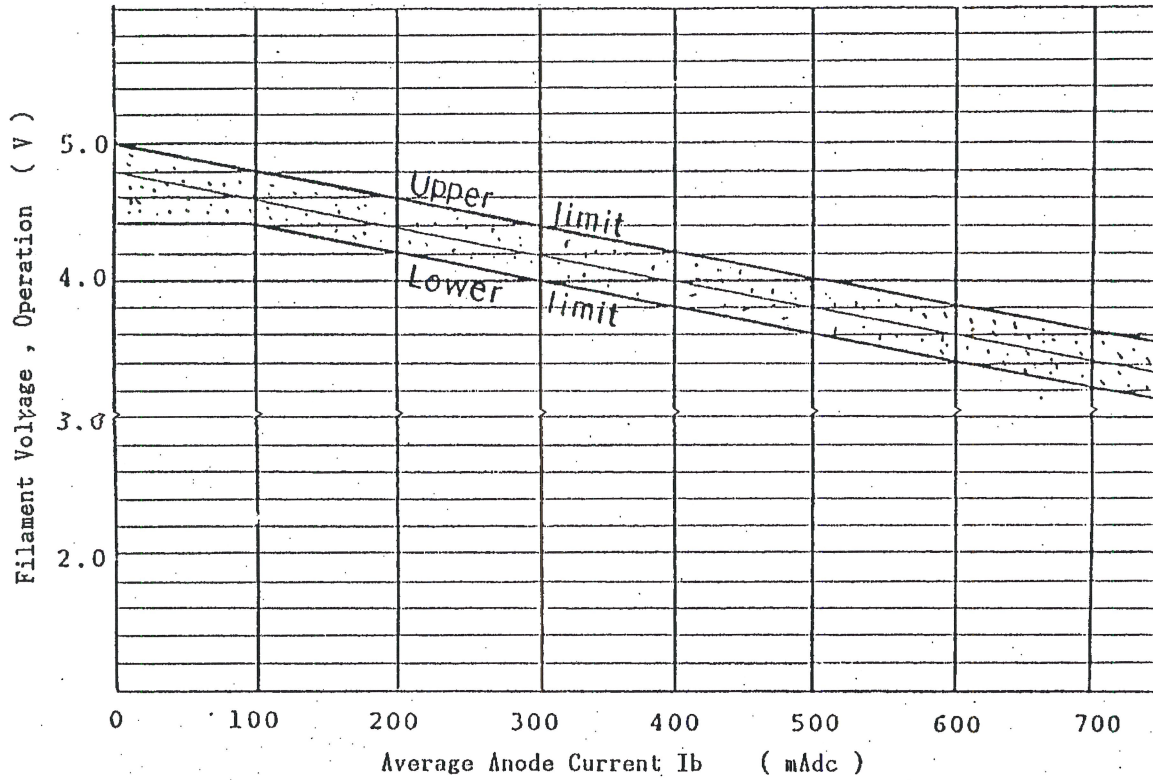
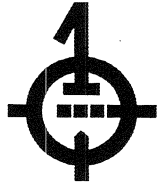


Fig .1 Reduction Chart of Filament Voltage

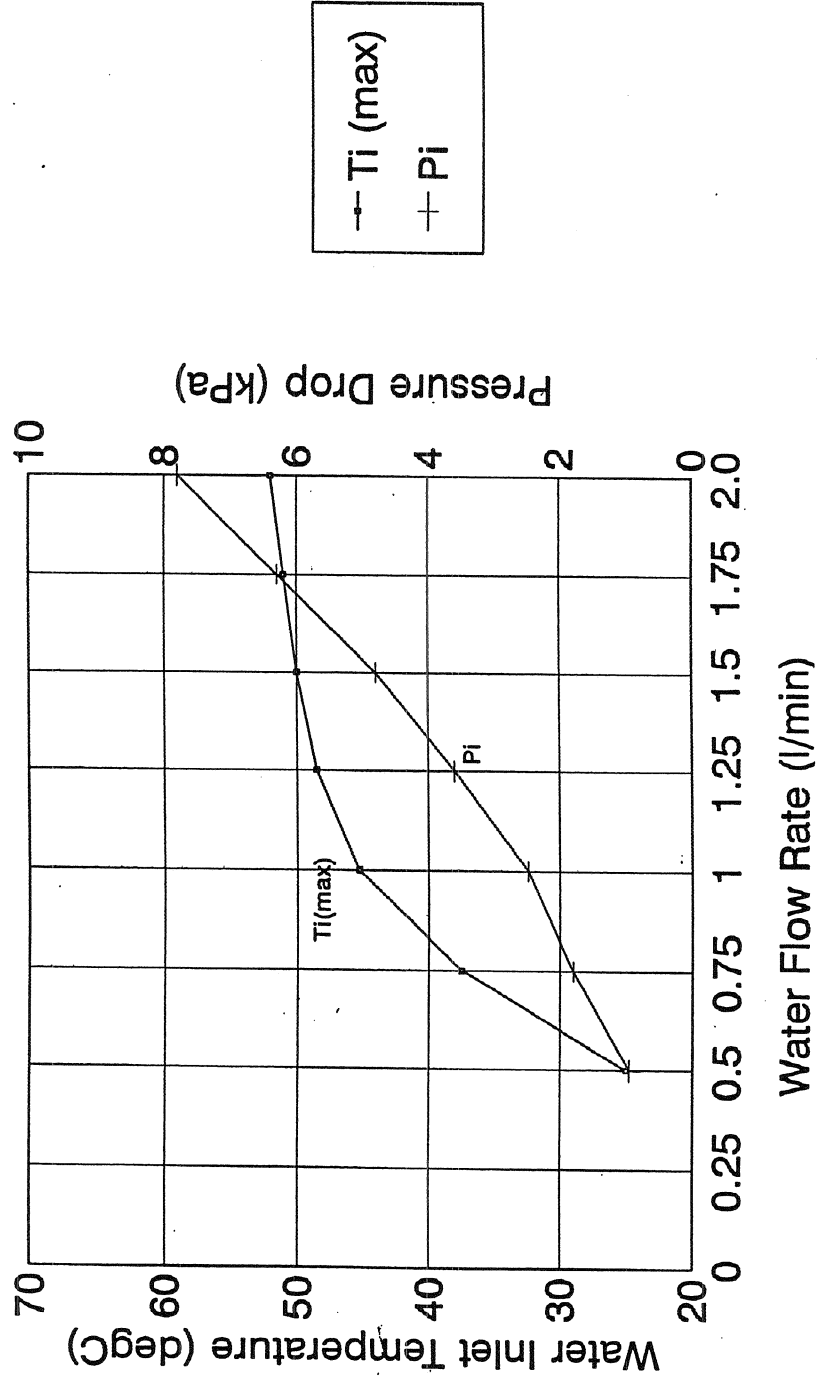
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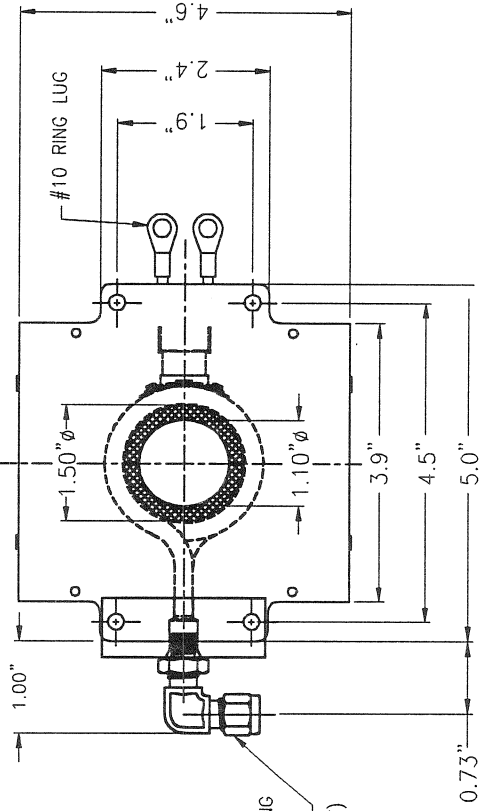


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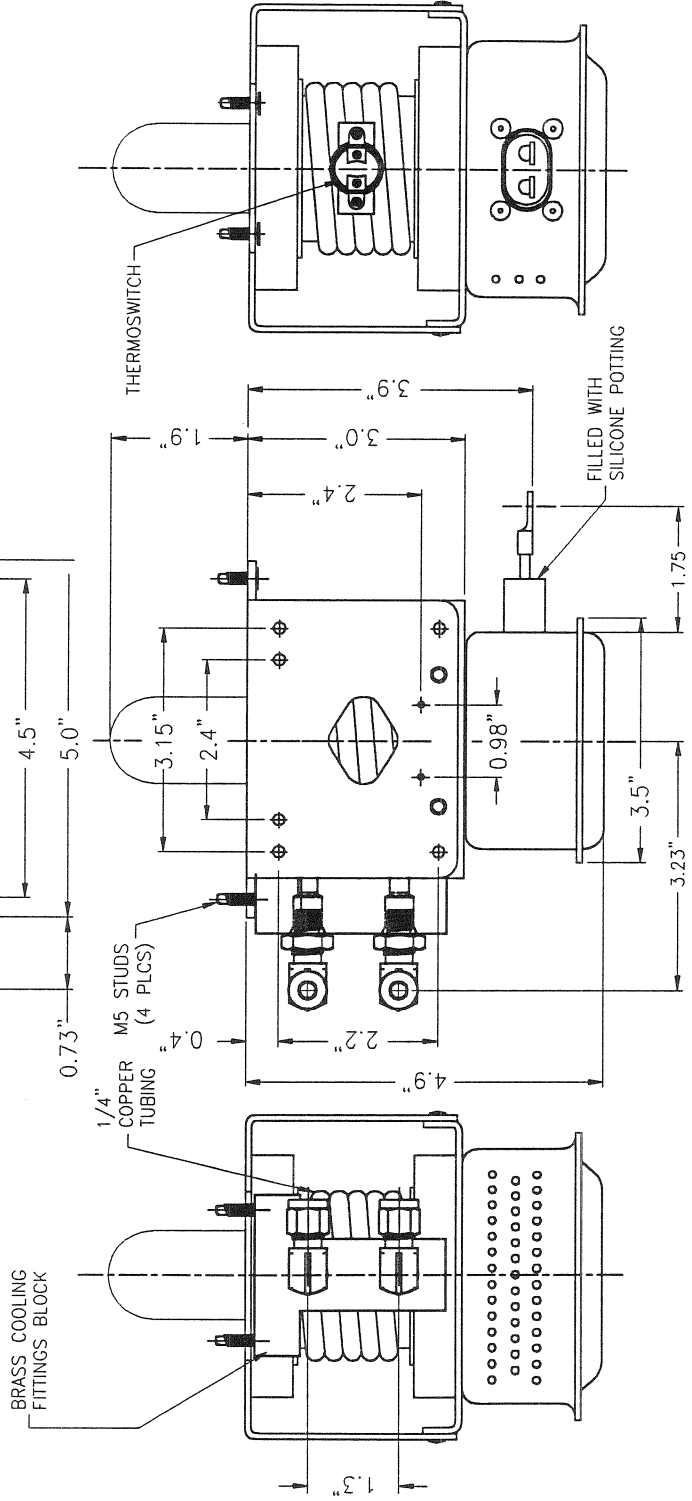
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Pressure Drop and Inlet Water Temperature vs. Flow Rate





SUPPLIED BY  
REL:  
SWAGELOK FITTING  
90° ELBOW FOR  
1/4" TUBING  
(SS-400-2-4ST)



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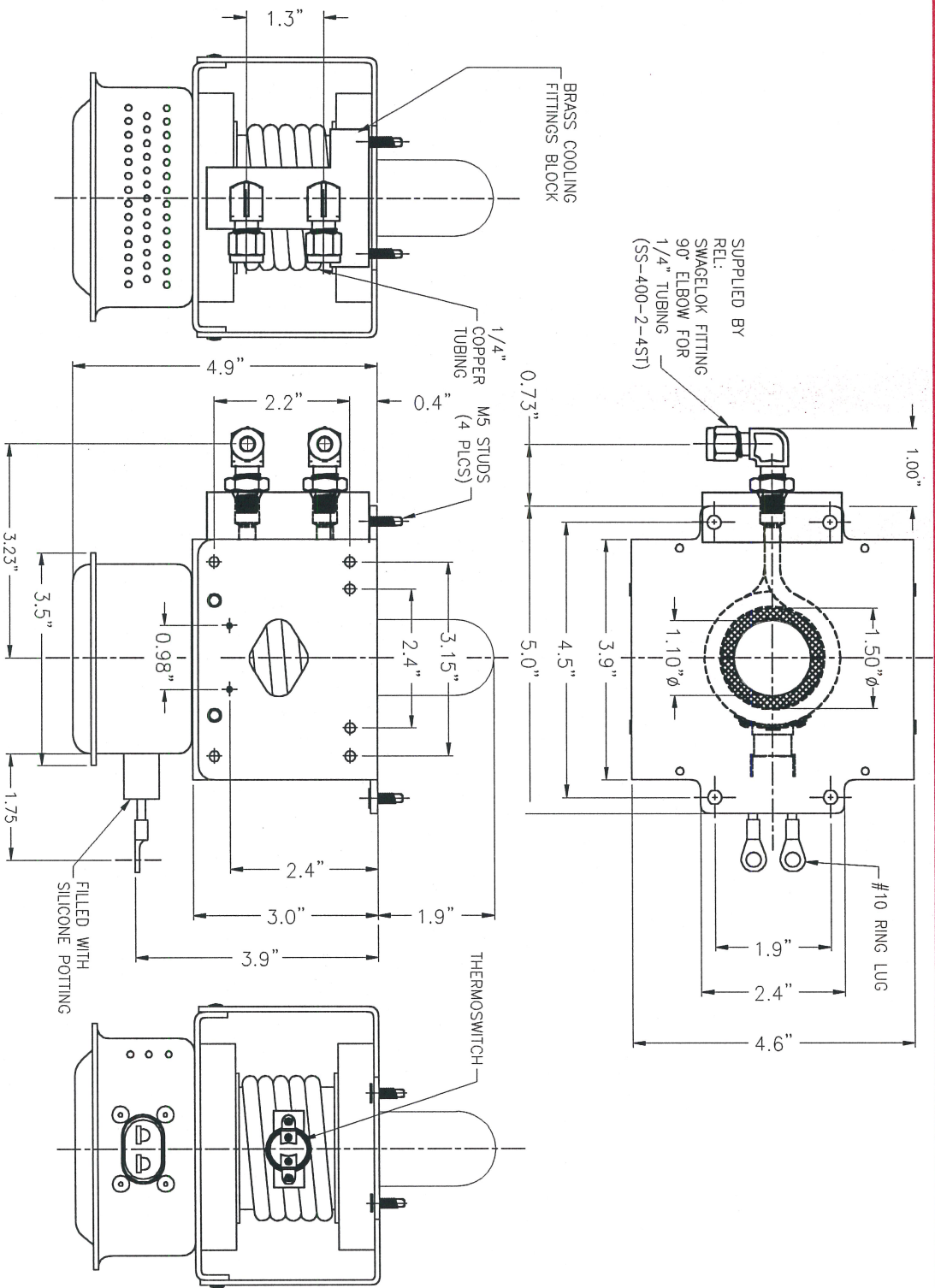
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