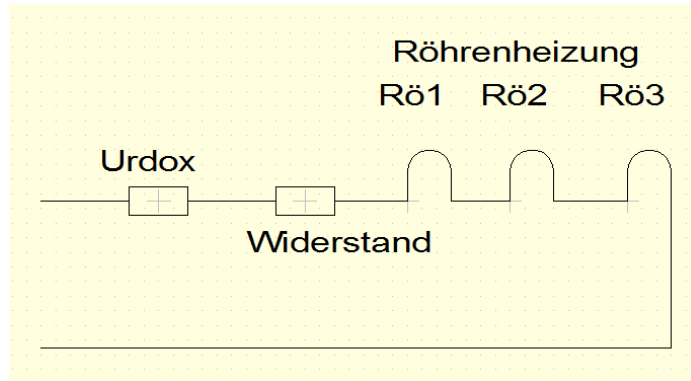


Urdox

The purpose of an urdox is to limit the inrush current for serial heated tubes (U-tubes) and to slowly increase the heating voltages (current) to preserve the filaments of the tubes. In the following a typical circuit:



An urdox has a high resistance when cold. As soon as current flows the resistance decreases over time. Urdoxes from Osram have an U... in their identification.

Testing a Urdox:

A urdox can be tested with the RoeTest in manual mode. First the tube data have to be created. For the tube type enter "Urdox". With this tube type the heater voltage is used for testing. Below an example for a U920P:

The screenshot shows the 'RoeTest - Datenbank' interface. The tube name is 'U920P'. The heating parameters are set to: Heizspannung [V]: 10.00, Heizstrom [A]: 0.200, Kaltwiderstand Heizfaden [Ohm]: 1700.00. The pin connection table is as follows:

Stift	System 1	System 2	System 3
Stift 1:			
Stift 2:			
Stift 3:			
Stift 4:			
Stift 5:	F1		
Stift 6:			
Stift 7:			
Stift 8:	F2		
Stift 9:			
Stift 10:			

The 'Bemerkungen zur Röhre' field contains: 'Urdox, 200 mA bei 7,5 .. 11V'. The 'Außenkontakt P8A' is selected in the dropdown menu.

Load the tube data and switch to manual mode. If one were to press Start now there would not happen anything for a long time. It would last very long until the urdox reduces its resistance. Therefore we choose the high heater voltage range and adjust the heater voltage (after starting) to about 100 V. After a while

the urdox will reduce its resistance and the current will increase.

Caution: The maximal voltage and the maximal current of the urdox must not be exceeded. **The current has to be monitored carefully and the voltage must be manually decreased until stable values are obtained.** If you do not decrease the voltage you can see nicely how the urdox is fried and then destroyed!

According to the data sheet there is a voltage drop across the U920P of 7.5-11V at 200 mA load when the urdox has warmed up. Urdoxes have a large variance. My NOS type has a voltage drop of about 13 V and is o.k.

The testing will take some time.