



● Features

- Water cooled resistors circularly cooled by flowing tap water (or distilled water or other liquid),replacement the high cost traditional deionized water.
- Power Range:100W-10KW
- High Power,Small Volume,Stable Operation,High Insulation,Good Sealing,Low Temperature & long life.
- Taps/Terminals leading out .

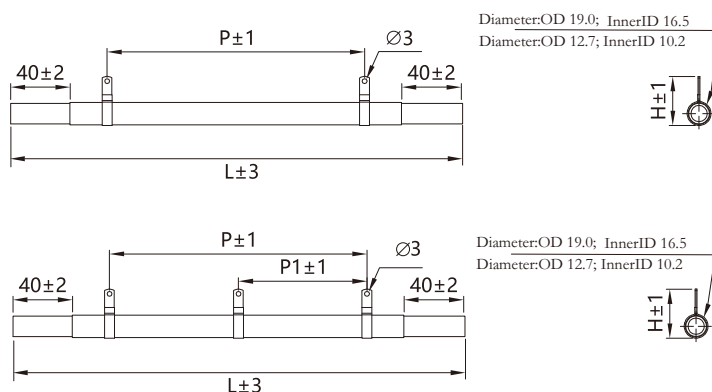
● Application

Widely used in mechanical equipment, load,furnace, smelting, wind power generation and solar power generation, used as energy absorption; In highpower electronic circuits used as shunt, voltage divider and load ; used in the regulating valve of static no power dynamic compensator (SVC) or thyristor converter valve of direct current transmission (HVDC).Ideal electronic component to be assembled inside high-power load banks.

● Construction

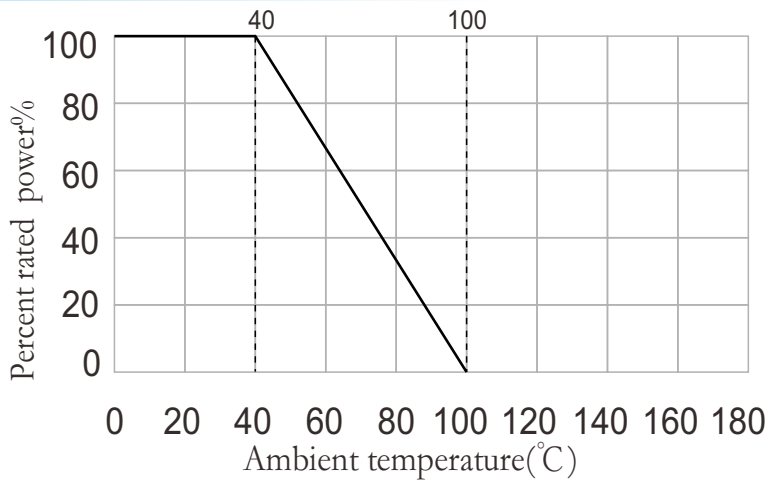
The Copper Tube Water Cooled Resistors is made of high-quality Red Copper as the matrix,unique insulating material and high-precision alloy wire wound. The unique welding method welding + 100% water pressure sealing test of each resistance eliminates the hidden danger of water leakage. Its outlet water temperature is between 40 °C and 60 °C . When in use, the cooling water shall be supplied first, and then the power shall be supplied after the water flow meets the requirements and fills the inner cavity of the resistor; During shutdown, cut off the power supply first and then the water to avoid dry burning and damage of the resistor.

● Dimensions



Type	Power (W)	Resistance Range (Ω)	D ± 0.5	L ± 1.0	P ± 1.0	P1 ± 1.0	H ± 1.0	Φ ± 0.5	T C R (ppm/°C)	Tolerance
WDN	100	0.1Ω-20KΩ	12.7	180	60	-	30	3	± 100PPM ± 250PPM	K (± 10 %) J (± 5 %) G (± 2 %) F (± 1 %)
	200		12.7	195	80	-	30	3		
	300		12.7	262	145	-	30	3		
	500		12.7	285	165	-	30	3		
	700		12.7	325	205	-	30	3		
	1000		12.7	400	265	-	30	3		
	1500		19	325	205	-	40	4.5		
	2000		19	400	265	-	40	4.5		
	350+350		12.7	325	102.5	102.5	30	3		
	500+500		12.7	400	132.5	132.5	30	3		
	1KW+1KW		19	500	190	190	40	4.5		

Derating Curve



Performance

Item	Requirement	Test Method
Resistance Tolerance	Testing Voltage $\leq 3V$, Ambient Temperature $25^{\circ}C$	F--G--J--K
T.C.R	$\frac{R1-R0}{R0(T1-T0)} \times 10^6$ (PPM/ $^{\circ}C$) <small>R0:Room Temperature(T0)Resistance R1:Room Temperature T0+100$^{\circ}C$(T1)Resistance</small>	$\pm 100PPM \sim \pm 260PPM$
Rated Load	$40^{\circ}C$, rated voltage, 1hour	$\Delta R \leq \pm (3\%R + 0.1\Omega)$
Dielectric Withstand Voltage	2.5KV-6KVac 60s, leakage current 2.5mA	$\Delta R \leq \pm (0.1\%R + 0.05\Omega)$
Insulation Resistance	1000Vdc	50~1000M Ω , 1Min
Terminal Tensile Strength	20N	No off
Vibration resistance	1.5mm, 10-55-10Hz, each 2hours	No damage, No off
Load Life	At rated voltage, 90 min "On", 30 min "Off", total 500hours	$\Delta R \leq \pm (3\%R + 0.1\Omega)$
Low Temp. Resistance	Store at $-55^{\circ}C \pm 2^{\circ}C$ for 16h	$\Delta R \leq \pm (1\%R + 0.1\Omega)$
High Temp. Resistance	Store at $70^{\circ}C \pm 2^{\circ}C$ for 16h	$\Delta R \leq \pm (1\%R + 0.1\Omega)$