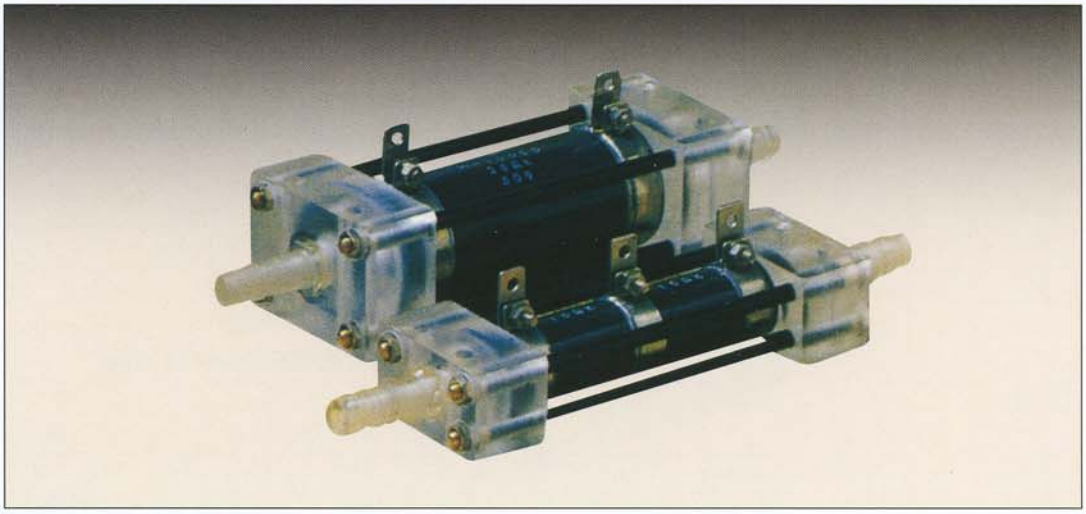
4. DIRECT WATER COOLING TYPE (W)

Direct Water Cooling Type (W), based on SP Type, will comply with all the requirements for no disconnection, high overload resistance, non-inductive, higher impulse current durability, compact design, higher electric power capacity, especially highly reliable protection of thyristor element. W Type is designed to be cooled with water like thyristors, so that the resistor can be used at a high electric power without being heated up.

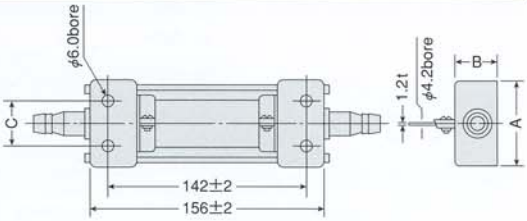


STANDARD SPECIFICATIONS:

(Standard Resistance Tolerances±10%)

Type No.	Rated Power (W)	Max Power (W)	Dimensions (mm) A	B	C	Resistance (Ω)
W- 500D	350	500	50	30	20	1～100
W-1000D	750	1000	60	45	30	1～100

●Hose Joint Material: Polycarbonate. Stainless steel is also available.



Unit: mm

Fig. 11 Derating Curve

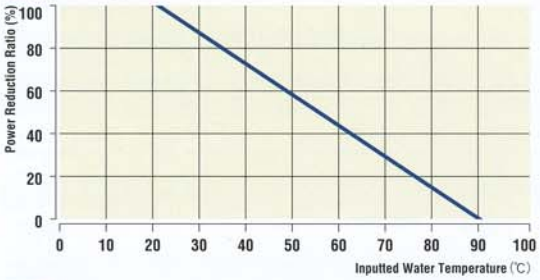


Fig. 12 Water Flow vs. Surface Temperature Increase(W-500D)

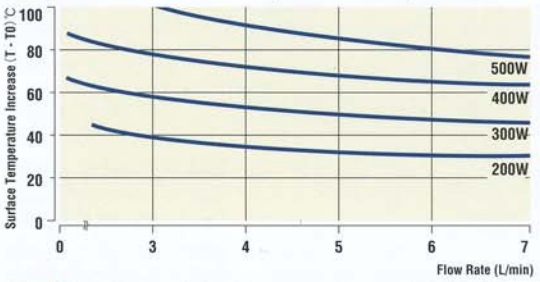


Fig. 13 Water Flow vs. Surface Temperature Increase (W-1000D)

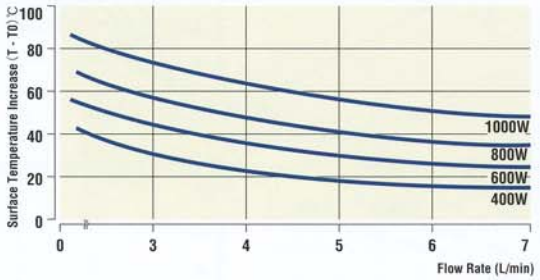


Fig. 14 Power vs. Surface Temperature Increase (W-500D)

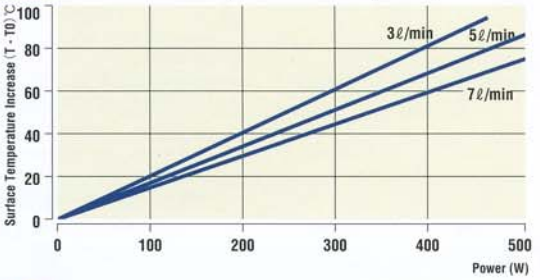
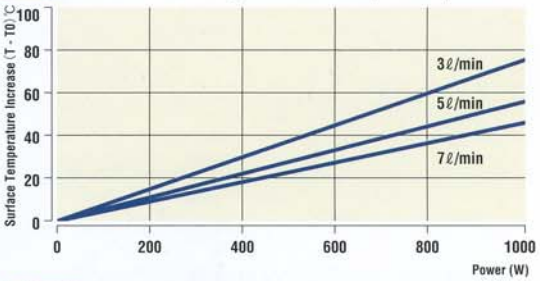


Fig. 15 Power vs. Surface Temperature Increase (W-1000D)



NOTES:

1. The resistor will be supplied with the hose joint for φ12mm hose ID as the standard specifications. Please inform the hose ID, if a hose with the other ID are to be used.
2. Use pure water with 1MΩ minimum for cooling.
3. Water pressure is to be 0.59 Mpa maximum.
4. In mounting, use bolts with φ4 mm. The fastening torque is to be 0.49 MNm approximately.
5. Fasten the hose bands at torque of 0.98～1.47 MNm. The excessive torque force will result at broken hose couplings.
6. Water is to run at flow rate of 5 L/min minimum. Don't stop water running.
7. Mount the resistor vertically. Water is to run from the lower to upper ports of the resistor. (Even when plural resistors are connected, let water run from the lower to upper ports of all the resistors.)
8. Use the resistor within the surge voltage range of 1,800 V.
9. The resistor is made of ceramic. Please handle the resistors with care.