



Type series WPAZQ..

10 – 40 kW, IP 54, water cooled,  
with terminals and terminal box



WPAZQ91404



Wire wound flat type resistors in protection degree IP 54 in aluminium enclosure, combined with water cooler with integrated Cu-tubes. Electric wiring on terminals in attached terminal box. Cooling connection on two pipe connections 1 ¼ inch (DIN ISO 228).

### Technologies

- very compact design
- high degree of protection IP 54
- very low excess of surface temperature ( <40K)
- designed for water cooling by industrial water and almost any standard cooling liquid (dirt particles ≤ 1mm)
- max. working pressure 4 bar (test pressure 10 bar)
- max. drop of pressure 0,5 bar
- with temperature switch

### Construction

Power resistor:  
Electrical connection at terminals 16-95mm<sup>2</sup> (depending on design) in terminal box incl. cable gland up to M50.

Cooling:  
The integrated Cu-tubes are for industrial water and almost any standard cooling liquids or oils – not for aggressive liquids, sea water or demineralized water.  
Water connection at 1 ¼ inch thread for max. 3600 litre/hour. Maximum "In-Water" +30°C, maximum "Out-Water" +45°C.

### Application

An important application is the use as internal load resistor or as brake resistor. The big advantage is the excellent transport of heat by the integrated cooling water connection.

### Special design

- Mounting and connection material out of stainless steel
- with additional PT100 element
- integrated into switch cabinet

### Electrical and mechanical data

type series	continuous dissipation in kW for cold "In-Water" of 20°C at 100%ED and a max. surface excess temperature of 30 K	necessary flow of cooling liquid in litre / h at a "Out-Water" temperature rise of 12K	production range Ω-value		dimensions in mm		approx. weight in kg
			from	up to	A	B	
WPAZQ90404	10	900	4,5	2,7 k	220	200	25
WPAZQ90604	15	1350	3,0	3,3 k	280	260	33
WPAZQ90804	20	1800	2,3	3,9 k	340	320	40
WPAZQ91004	25	2250	1,8	4,7 k	400	380	48
WPAZQ91204	30	2700	1,5	5,6 k	460	440	55
WPAZQ91404	35	3150	1,3	6,8 k	520	500	63
WPAZQ91604	40	3600	1,2	8,2 k	580	560	70

The given power rating values are valid for 100%CD (continuous dissipation). For short time operation you will find the values in the following table as a function of the duty cycle factor (DCF). Just multiply by the corresponding overload factor (OLF).

DCF	60%	40%	25%	15%	6%
OLF	1,2	1,6	2,2	3,1	5,5

These overload factors are valid for a total cycle time of maximum 120 s

