

Flat Braking Resistors

100 – 250 W, DB / 1 – 2.5 kW, KB

Series BW 150

Type BW 152

Applications:

Braking resistors are used with inverters, driving motors with a dynamic load that requires to be stopped quickly such as lifts, cranes or high-speed mechanisms.

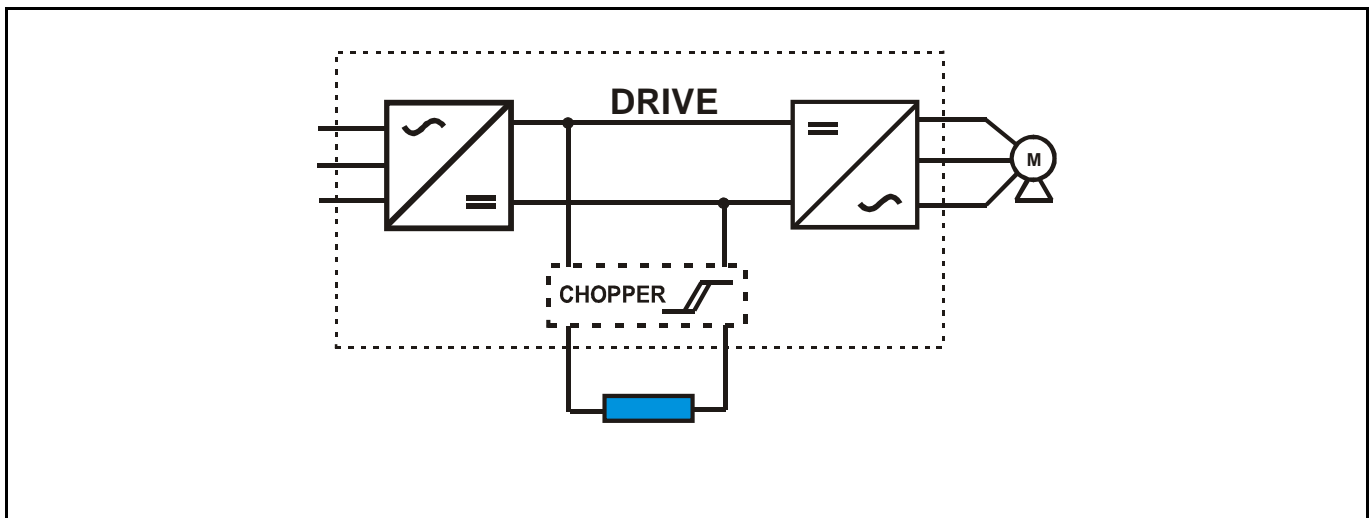
The braking resistor is connected in the DC link, between the rectifier and the switching semiconductors. When the DC voltage rises, to a pre-selected limit, a chopper circuit switches in the braking resistor thereby allowing excess energy to be “dumped” in the form of heat, instead of causing damage to the inverter.

When the DC level drops to a lower preset minimum limit the braking resistor is switched out of circuit until it is required again.



Protection Rating IP 20	Test voltage 2.5 kV DC
Maximum temperature 250 °C / 482°F	Ambient temperature -10...+40 °C / 14...104°F

Circuit example



Benefits:

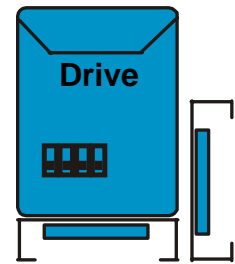
- Decelerating a load with large inertia
- Increase the control torque of the inverter
- For frequently repeated ON/OFF cycles
- Compact construction
- Easy installation
- Suitable for the use with any frequency drive
- Compact design
- Continuous power: Max. 2.5kw
- Dielectric strength
- High temperature wire
- CE Marked
- DIN 41 480 compliant

Type	Resistance values R [Ohm]	Continuous power P [W]	Max. Operating voltage U [V]
BW 152 / 100	25-1600	100	900
BW 152 / 150	30-1000	150	900
BW 152 / 200.	40-350	200	900
BW 152 / 250	50-300	250	900

Other power ratings on request

REO-USA, Inc. can offer virtually any braking resistor design to suit any frequency drive, with optional mounting methods, such as footprint, book style or compact. The footprint version is particularly useful for retrofit applications because no extra panel space is required. Most constructions are in a modular form that is easy to install.

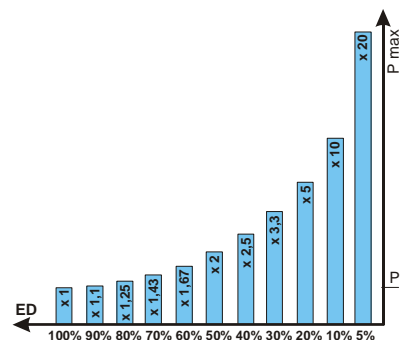
Additional forced air cooling can be fitted to some versions and this greatly increases their power rating, or alternatively enables use within a confined space, such as an IP65 / NEMA 4X enclosure for food quality or clean room applications.



With assembly brackets

Load diagram

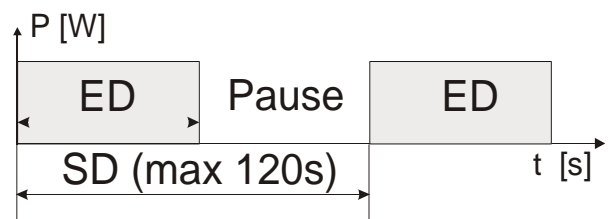
$$P_{\max} = \frac{P * 100}{ED[\%]}$$



SD = Cycle time max 120 sec.

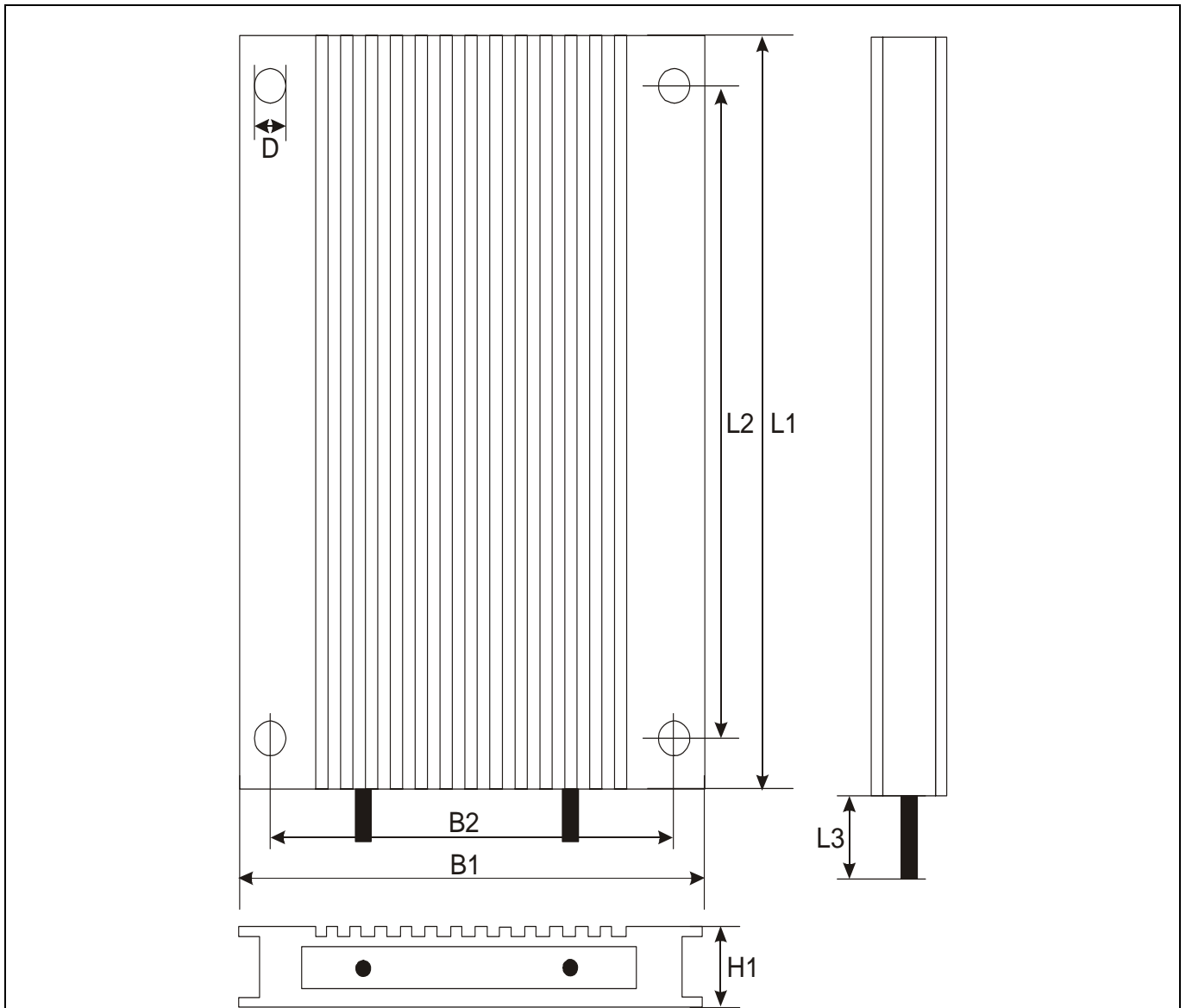
$$ED[\%] = \frac{ED[s]}{SD[s]} * 100$$

ED = Duty Cycle



A braking resistor is selected according to the system duty cycle requirements. If the resistor is not being used continuously then it can be used for a higher power rating because it has time to cool during the “rest” period. To calculate the above formula is used.

Dimension Drawing



Type	B1 [mm]	B2 [mm]	H1 [mm]	L1 [mm]	L2 [mm]	L3 [mm]	D [mm]	Connection cable
BW 152 / 100	100	84	14	100	70	250	4.2	2 x AWG 14, UL 1659
BW 152 / 150	100	84	14	150	120	250	4.2	2 x AWG 14, UL 1659
BW 152 / 200	100	84	14	200	170	250	4.2	2 x AWG 14, UL 1659
BW 152 / 250	100	84	14	250	220	250	4.2	2 x AWG 14, UL 1659

Custom mounting positions are available upon request