

# Braking Resistors With braking chopper

Series BW 300  
Type BW 302/..

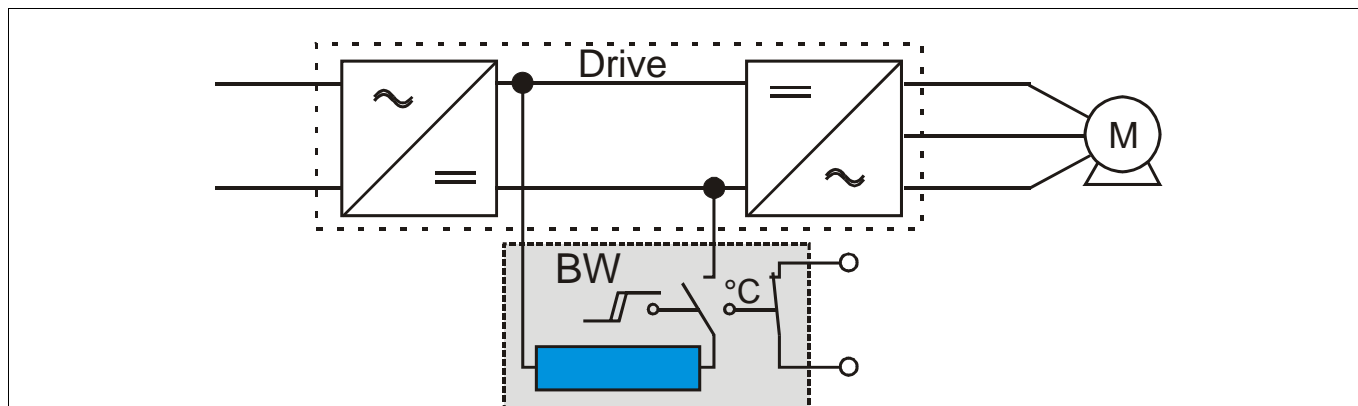
## Applications:

Conversion of braking energy into heat for drives with quick speed variations **without the use of additional electronics.**



	Test voltage L-N 2100 V DC 1 s    L/N-PE 2700 V DC 1s
Overload see diagram	Climatic rating DIN IEC 60068-1

## 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. 7500W
- Dielectric strength
- CE Marked
- DIN 41 480 compliant

### Technical Data

Type	Voltage response [V]	Switch-off [V]	Continuous Power [W]	Resistance values [Ω]	Max. Operating voltage [V]
BW 302/3/R[Ω]	763	737	3000	24 – 330	1000
BW 302/4/R[Ω]	763	737	4000	24 – 250	1000
BW 302/5.5/R[Ω]	763	737	5500	24 – 181	1000
BW 302/7.5/R[Ω]	763	737	7500	24 – 130	1000

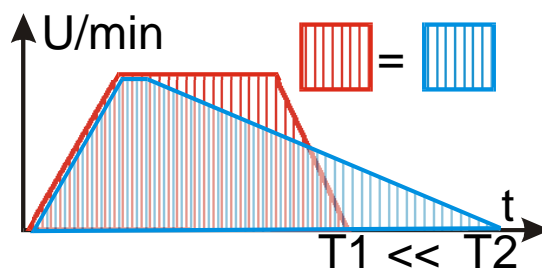
Resistance values conforming to E 6

Other power ratings on request

Option: Connecting strands  
Low-inductance winding

#### Dynamics Increase

The use of a chopper resistor enables to considerably increase the dynamics on a drive-motor-combination within only a few minutes. This often means a strong increase of productivity. For instance, it is possible to reduce the setting times with a better speed utilization up to the final point.



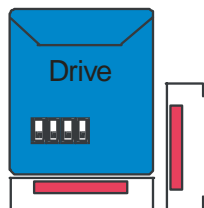
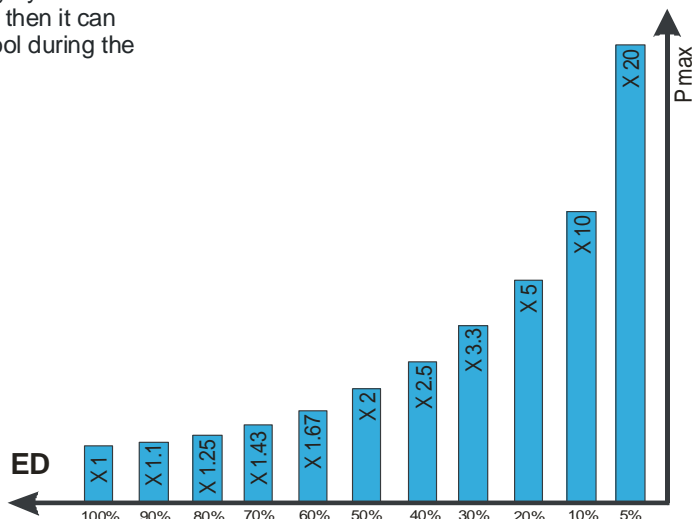
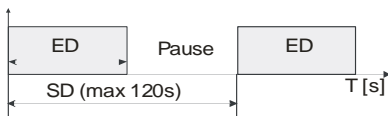
### Power Rating Calculation

A braking resistor is selected according to the systems 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 following formula is used:

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

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

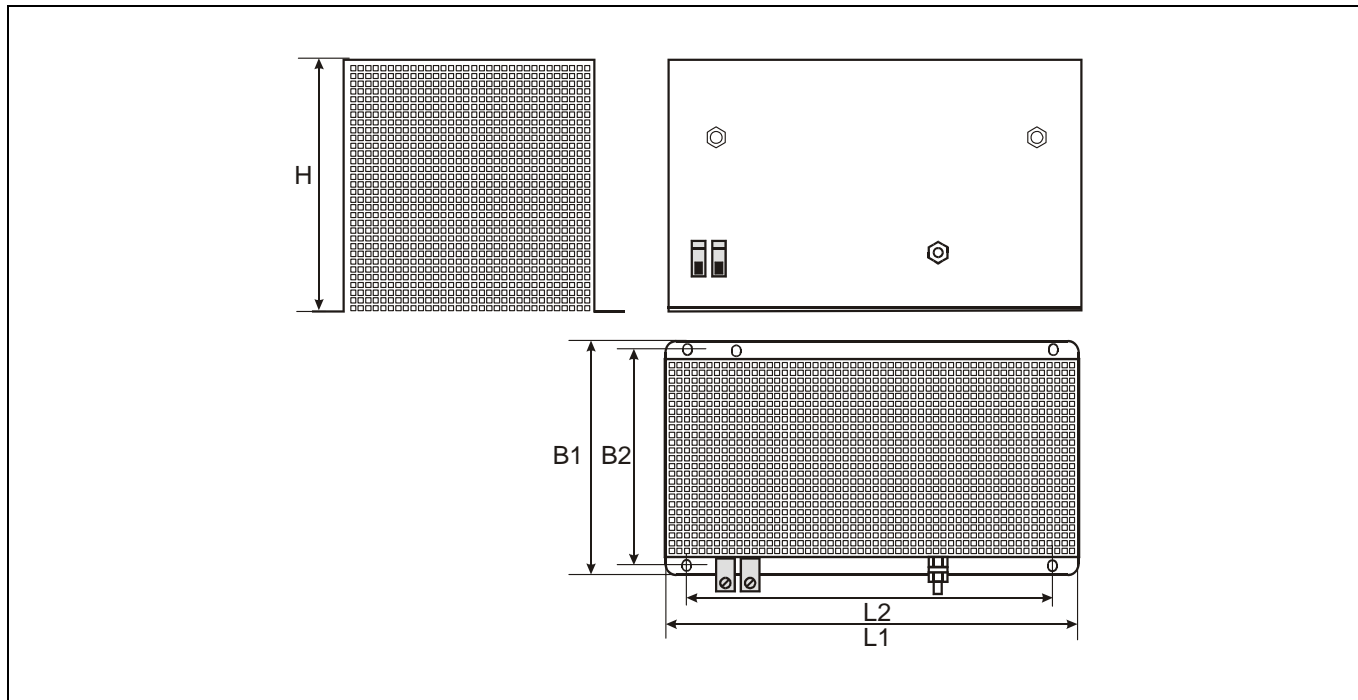
Where ED = Duty Cycle  
SD = Cycle time



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 enclosure for food quality or clean room applications.

### Dimension Drawing



Type	Dimensions					Connection terminal
	B1 [mm]	B2 [mm]	H [mm]	L1 [mm]	L2 [mm]	
BW 302/3/R[Ω]	395	370	260	490	380	50 mm <sup>2</sup>
BW 302/4/R[Ω]	395	370	260	490	380	50 mm <sup>2</sup>
BW 302/5.5/R[Ω]	595	570	260	490	380	50 mm <sup>2</sup>
BW 302/7.5/R[Ω]	595	570	260	490	380	95 mm <sup>2</sup>