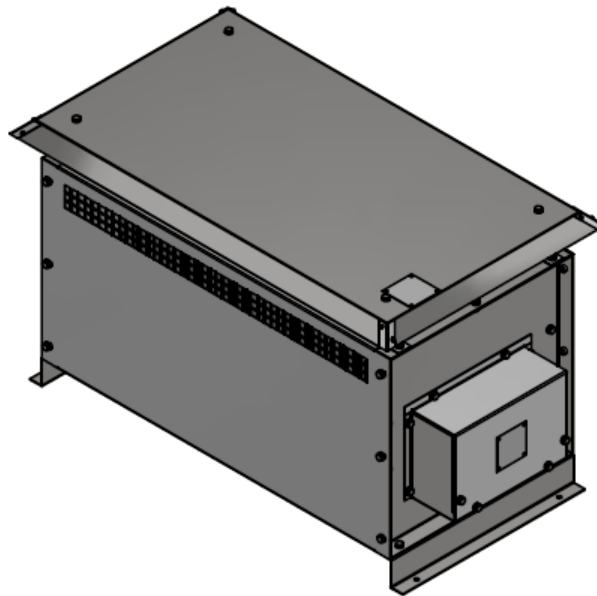


# HIGH POWER BRAKE RESISTORS HPBR50-XX

IP20 and IP22



REV	DATE	CHANGE DESCRIPTION	CHANGED BY
2	2021-09-28	• Include HPBR-16, 20, 26, 32	W. M



**HIGH POWER BRAKE RESISTOR TYPE HPBR50-08, -10, -12, -16, -20, -26, -32**

**POWER RANGE: 7 – 232KW**

**DESCRIPTION: Type HPBR50-XX. 1-Tier Construction**

The HPBR50-08 to HPBR50-32 range of enclosed brake resistors are a low cost solution for high power, short duty dynamic braking of electric motors driven by a variable speed/frequency drive (VSD, VFD).

A more compact and non-enclosed option is also available for the HPBR-08 version which may be fitted to the internal chassis of an enclosure.

**APPLICATIONS**

- Short duty cycle dynamic braking. Refer to the table of Electrical Specifications.
- Continuous operation.

**INDUSTRY**

Automation, Manufacturing, Mining.

**ACTIVE MATERIAL**

High grade stainless steel resistive alloy often referred to as grid or plate resistors.

**MECHANICAL CHARACTERISTICS**

- Enclosure material: Galvanized metal, standard. Grade 304 stainless steel is optional.
- Enclosure type HPBR50-08: 9522-023
- Enclosure type HPBR50-12: 9522-022
- Enclosure type HPBR50-16: 9522-024
- Enclosure type HPBR50-20: 9522-025
- Enclosure type HPBR50-26: 9522-026
- Enclosure type HPBR50-32: 9522-028
- Rigid construction.
- Ingress Protection: IP20 standard, IP22 optional.
- Removable terminal cover.

**TERMINAL CONNECTIONS**

- M8 stud.
- Cable entry: Gland-plate.

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**ELECTRICAL SPECIFICATIONS: Type HPBR50-08, 10, 12, 16, 20, 26, 32**

Duty %	100% Continuous	50%	40%	25%	15%	10%	6%
T <sub>on</sub> sec	120	60	48	30	18	12	7
T <sub>off</sub> sec	0	60	72	90	102	108	113
<b>Power HPBR50-08</b>	7kW	12kW	16kW	22kW	32kW	51kW	58kW
<b>Power HPBR50-10</b>	9kW	16kW	20kW	28kW	40kW	64kW	72kW
<b>Power HPBR50-12</b>	11kW	19kW	24kW	33kW	48kW	77kW	87kW
<b>Power HPBR-16</b>	14kW	25kW	32kW	45kW	64kW	103kW	116kW
<b>Power HPBR-20</b>	18kW	32kW	40kW	56kW	80kW	129kW	145kW
<b>Power HPBR-26</b>	24kW	41kW	52kW	73kW	104kW	167kW	188kW
<b>Power HPBR-32</b>	29kW	51kW	64kW	90kW	129kW	206kW	232kW

- Period  $P$  (cycle time) = 120 seconds.  $P = T_{on} + T_{off}$
- Power values @ 20°C ambient.
- Resistance tolerance: +/- 5%
- Voltage: 1kV
- >1kV upon request.

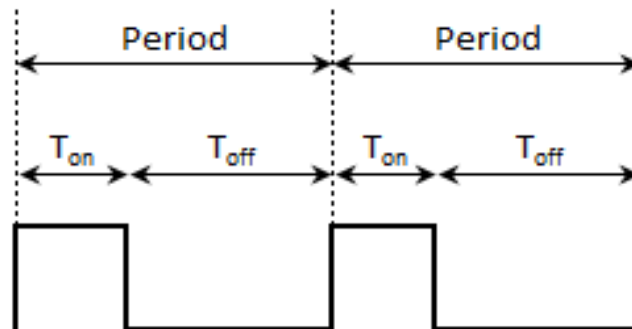
**REQUIRED INFORMATION:**

Upon your enquiry, refer to the diagram of the **Duty Cycle** below. The following is required for us to offer the most economical solution:

- Power of the resistor.
- Minimum resistance value.
- T<sub>on</sub> = time in seconds that the resistor is powered.
- T<sub>off</sub> = time in seconds that the resistor is not powered.
- Number of repetitive cycles (period).

**NOTE:** The above ELECTRICAL SPECIFICATIONS TABLE is a guide only. The required resistance value may require the use of a higher power rating to obtain the desired resistance value.

**Duty Cycle**



$$\text{Period} = T_{on} + T_{off}$$

$$\text{Duty Cycle} = T_{on} / (T_{on} + T_{off}) * 100$$

(On Percentage)

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**HIGH POWER RESISTOR TYPE HPBR50-08**

Enclosure dimensions: HPBR50-08

Enclosure type: 9522-023

Ingress protection: IP20 as drawing below or IP22 with a lid

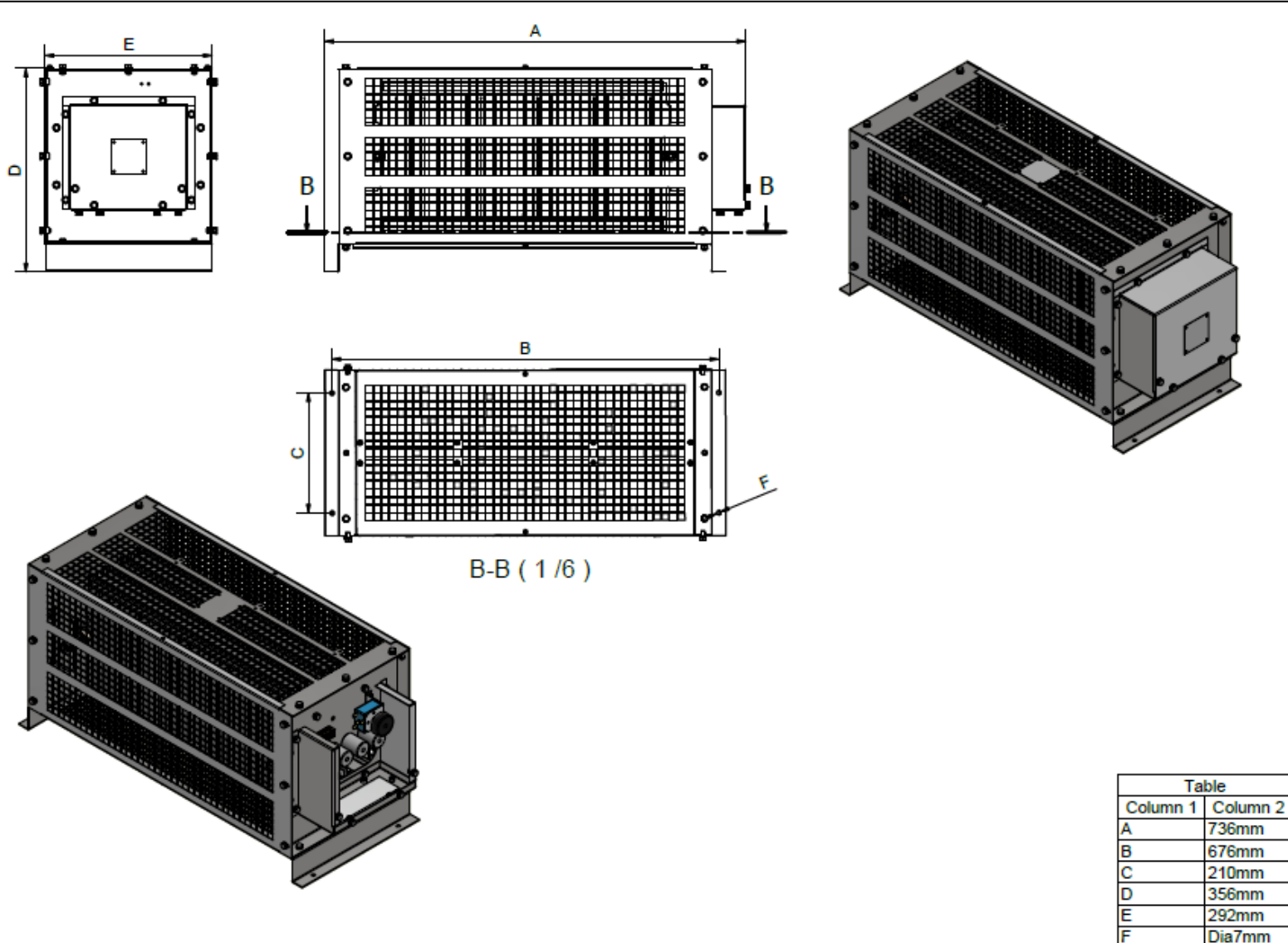


Table	
Column 1	Column 2
A	736mm
B	676mm
C	210mm
D	356mm
E	292mm
F	Dia7mm

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**HIGH POWER RESISTOR TYPE HPBR50-10, 12**

Enclosure dimensions: HPBR50-10 and HPBR-12  
 Enclosure type: 9522-022  
 Ingress protection: IP20

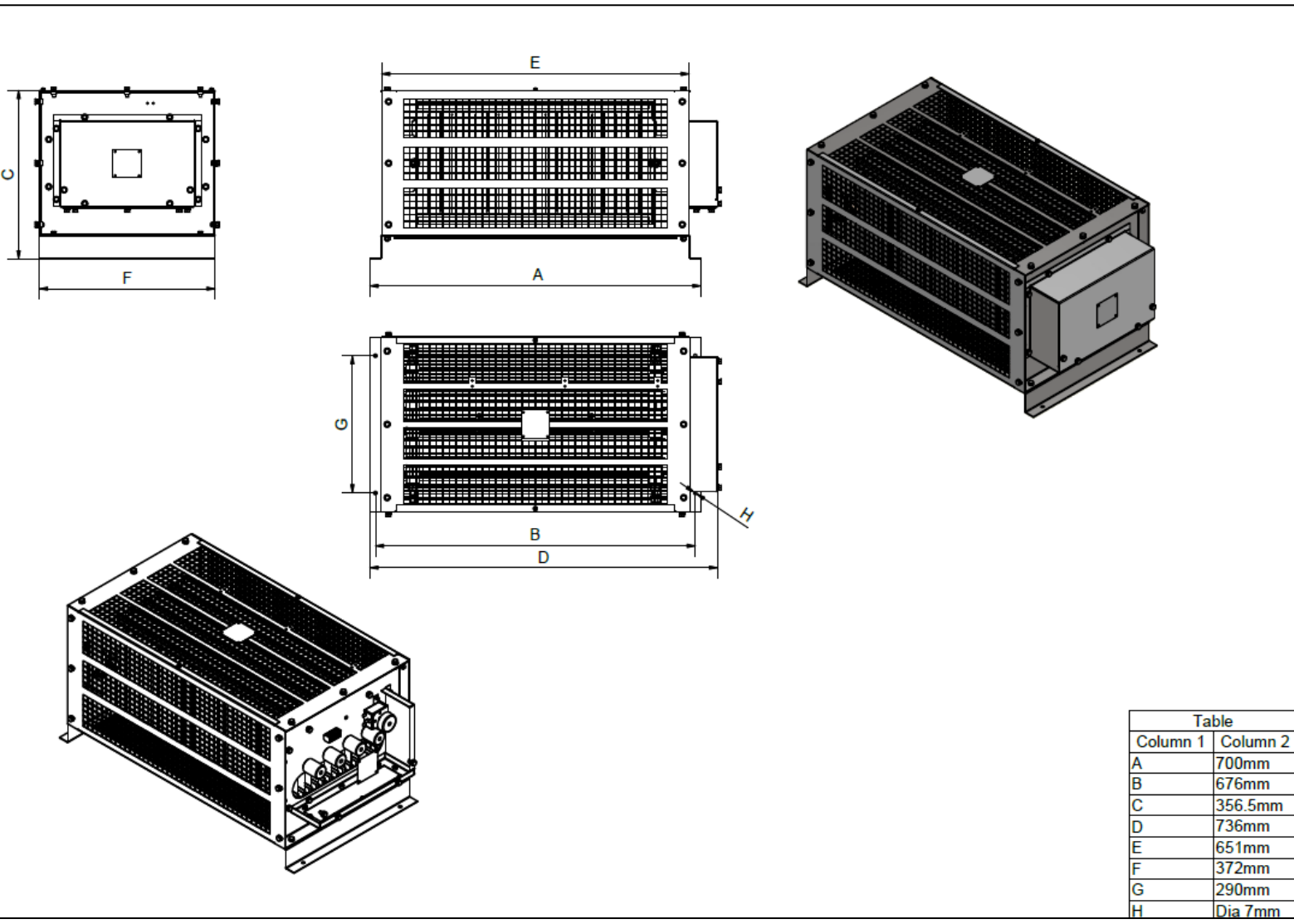


Table	
Column 1	Column 2
A	700mm
B	676mm
C	356.5mm
D	736mm
E	651mm
F	372mm
G	290mm
H	Dia 7mm

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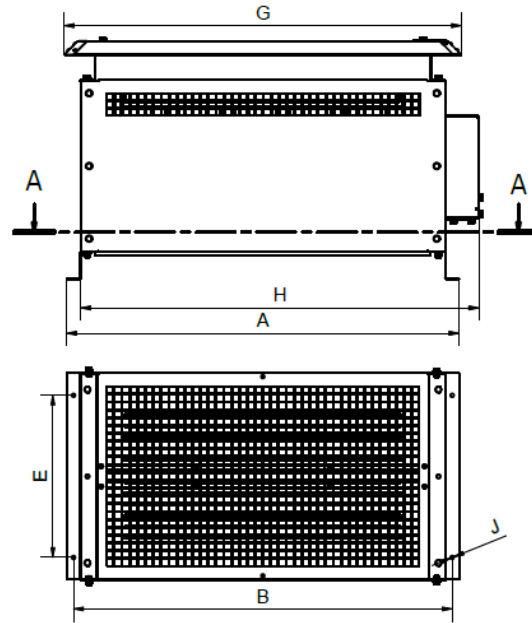
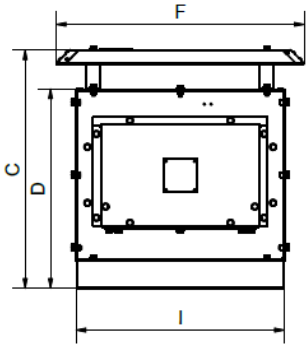


**HIGH POWER RESISTOR TYPE HPBR50-10, 12**

Enclosure dimensions: HPBR50-10 and HPBR-12

Enclosure type: 9522-022

Ingress protection: IP22



A-A (1 / 7)

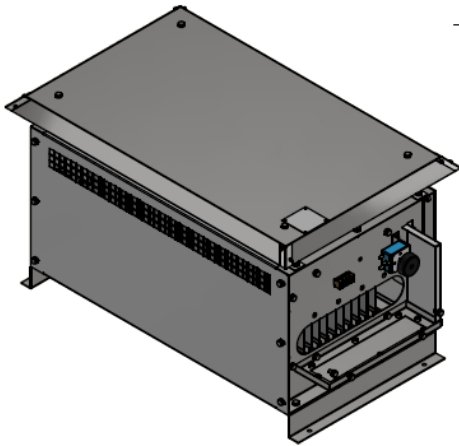
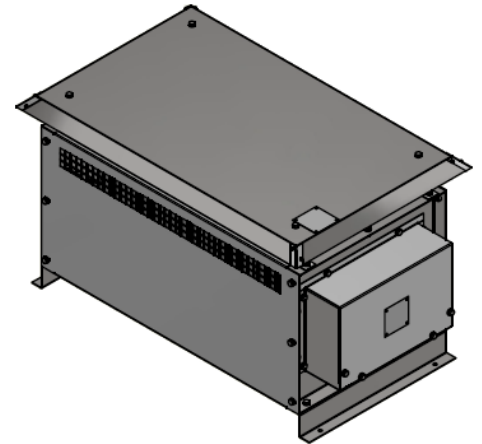


Table	
Column 1	Column 2
A	700mm
B	676mm
C	426mm
D	356.5mm
E	290mm
F	443mm
G	709mm
H	711mm
I	372mm
J	Dia 7mm

Drawings of larger units available upon request.

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