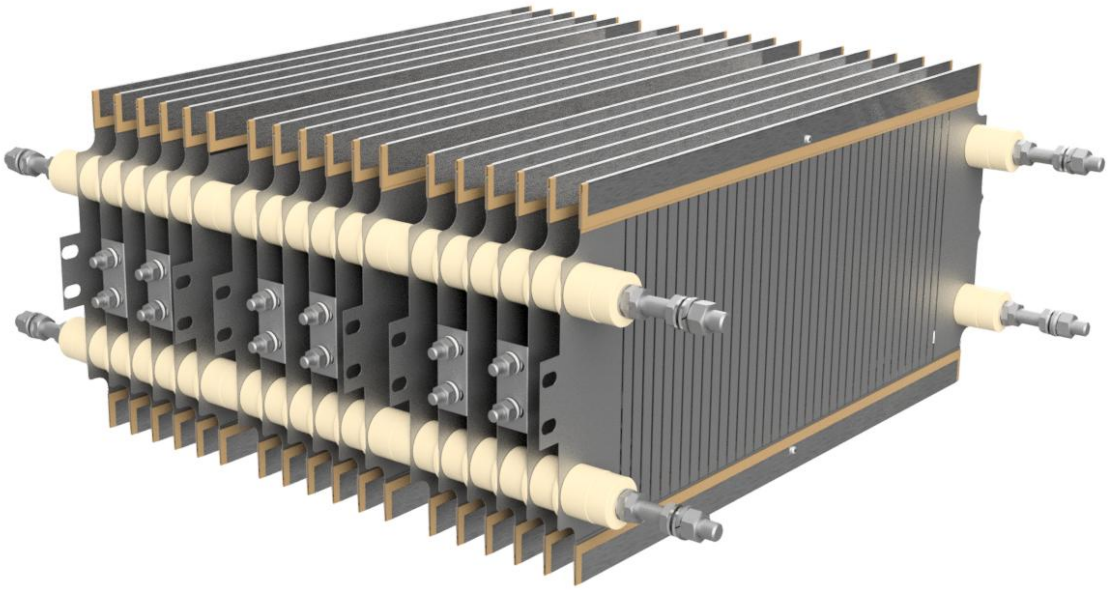
STEEL GRID BRAKE RESISTORS

IP20 and IP22

TYPE HPBR34-06, -08, -10, -12

POWER RANGE: 2.4kW–4.8kW @ 100% Duty. 28kW–56kW @ 6% Duty



REV	DATE	CHANGE DESCRIPTION	CHANGED BY
4	2025-10-16	• Addition of HPBR34 range	W. M

STEEL GRID BRAKE RESISTOR TYPE HPBR34-06, -08, -10, -12

DESCRIPTION: Type HPBR34-XX.

The HPBR34-06 to HPBR34-12 range of enclosed brake resistors is a low cost solution for high power, short duty dynamic braking of electric motors driven by a variable speed/frequency drive (VSD, VFD).

The HPBR34-XX is the "little sister" version of larger HPBR50-XX range described below, allowing for a more compact solution where space is limited.

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

APPLICATIONS

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

ACTIVE MATERIAL

- High grade stainless steel resistive alloy
- Resistor type: Grid/plate resistors

MECHANICAL CHARACTERISTICS

- Enclosure material: Galvanized metal, standard. Grade 304 stainless steel is optional
- Rigid construction
- Ingress Protection: IP20 standard, IP22 optional (IP20 enclosure with raised roof)
- Removable terminal cover

TERMINAL CONNECTIONS

- M8 stud
- Cable entry: Gland-plate

OPTIONAL EXTRAS

- An adjustable thermostat may be fitted to monitor the air temperature above the resistors
- Thermostat connections: NO, COM, NC potential free contacts

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ELECTRICAL SPECIFICATIONS: Type HPBR34-06, -08, -10, -12

Duty %	**100%** (Continuous)	**50%**	**40%**	**25%**	**15%**	**10%**	**6%**
T_{on} seconds (s)	120s	60s	48s	30s	18s	12s	7s
T_{off} seconds (s)	0s	60s	72s	90s	102s	108s	113s
Power HPBR34-06	2.4kW	6.4kW	7.7kW	10.2kW	16.8kW	23.0kW	28.1kW
Power HPBR34-08	3.2kW	8.5kW	10.2kW	13.6kW	22.4kW	30.6kW	37.4kW
Power HPBR34-10	4.0kW	10.6kW	12.8kW	17.0kW	28.0kW	38.3kW	46.8kW
Power HPBR34-12	4.8kW	12.8kW	15.3kW	20.4kW	33.6kW	46.0kW	56.1kW

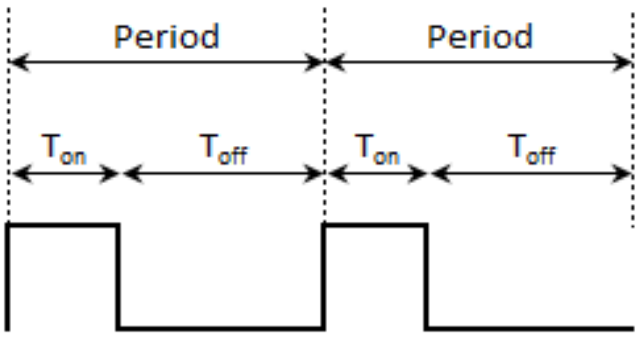
- Period ***P*** (cycle time) = 120 seconds**.** ***P*** **= T_{on} + T_{off}** (Refer to Duty Cycle diagram below)
- Power values @ 20°C ambient
- Resistance tolerance: +/- 5%
- Voltage: 1.25kV
- >1.25kV upon request

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_{on}** = time in seconds that the resistor is powered. (Braking time)
- **T_{off}** = time in seconds that the resistor is not powered
- Number of repetitive cycles (period)
- Location of the installation for the resistor
-

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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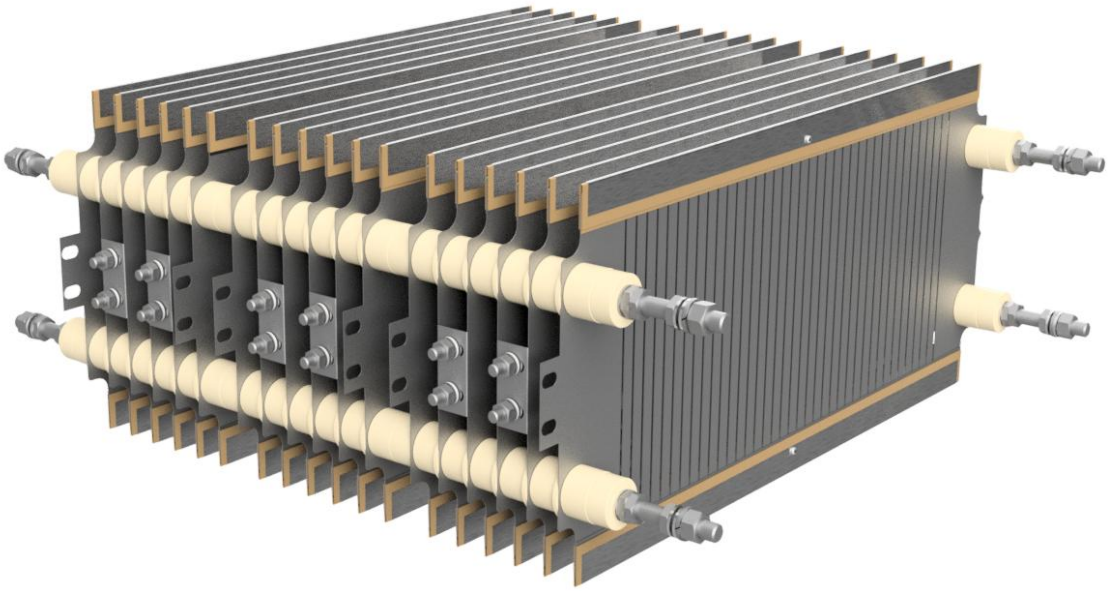
STEEL GRID BRAKE RESISTOR TYPE **HPBR50**-08, -10, -12, -16, -20, -26, -32

POWER RANGE: 7kW–30kW @ 100% Duty. 58kW-232kW @ 6% Duty



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DESCRIPTION: Type HPBR50-XX.

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
- Resistor type: Grid/plate resistors

MECHANICAL CHARACTERISTICS

- Enclosure material: Galvanized metal, standard. Grade 304 stainless steel is optional
- Rigid construction
- Ingress Protection: IP20 standard, IP22 optional (IP20 enclosure with raised roof)
- Removable terminal cover

TERMINAL CONNECTIONS

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

OPTIONAL EXTRAS

- An adjustable thermostat may be fitted to monitor the air temperature above the resistors.
- Thermostat connections: NO, COM, NC. Potential free contacts.

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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_{on} seconds (s)	120s	60s	48s	30s	18s	12s	7s
T_{off} seconds (s)	0s	60s	72s	90s	102s	108s	113s
Power HPBR50-08	7kW	12kW	16kW	22kW	32kW	51kW	58kW
Power HPBR50-10	9kW	16kW	20kW	28kW	40kW	64kW	72kW
Power HPBR50-12	11kW	19kW	24kW	33kW	48kW	77kW	87kW
Power HPBR50-16	14kW	25kW	32kW	45kW	64kW	103kW	116kW
Power HPBR50-20	18kW	32kW	40kW	56kW	80kW	129kW	145kW
Power HPBR50-26	24kW	41kW	52kW	73kW	104kW	167kW	188kW
Power HPBR50-32	29kW	51kW	64kW	90kW	129kW	206kW	232kW

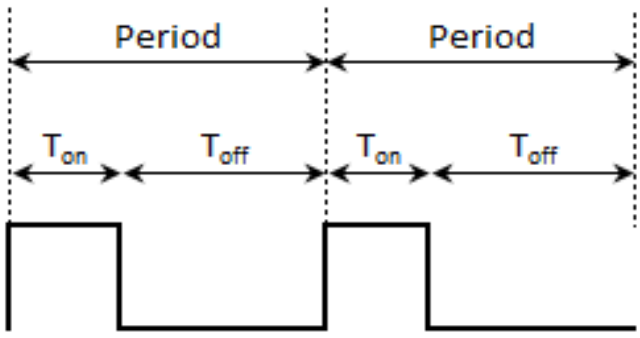
- Period ***P*** (cycle time) = 120 seconds. ***P* = T_{on} + T_{off}** (Refer to Duty Cycle diagram below)
- Power values @ 20°C ambient
- Resistance tolerance: +/- 5%
- Voltage: 1.25kV
- >1.25kV upon request

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_{on}** = time in seconds that the resistor is powered (Braking time)
- **T_{off}** = time in seconds that the resistor is not powered
- Number of repetitive cycles (period)
- Location of the installation for the resistor

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



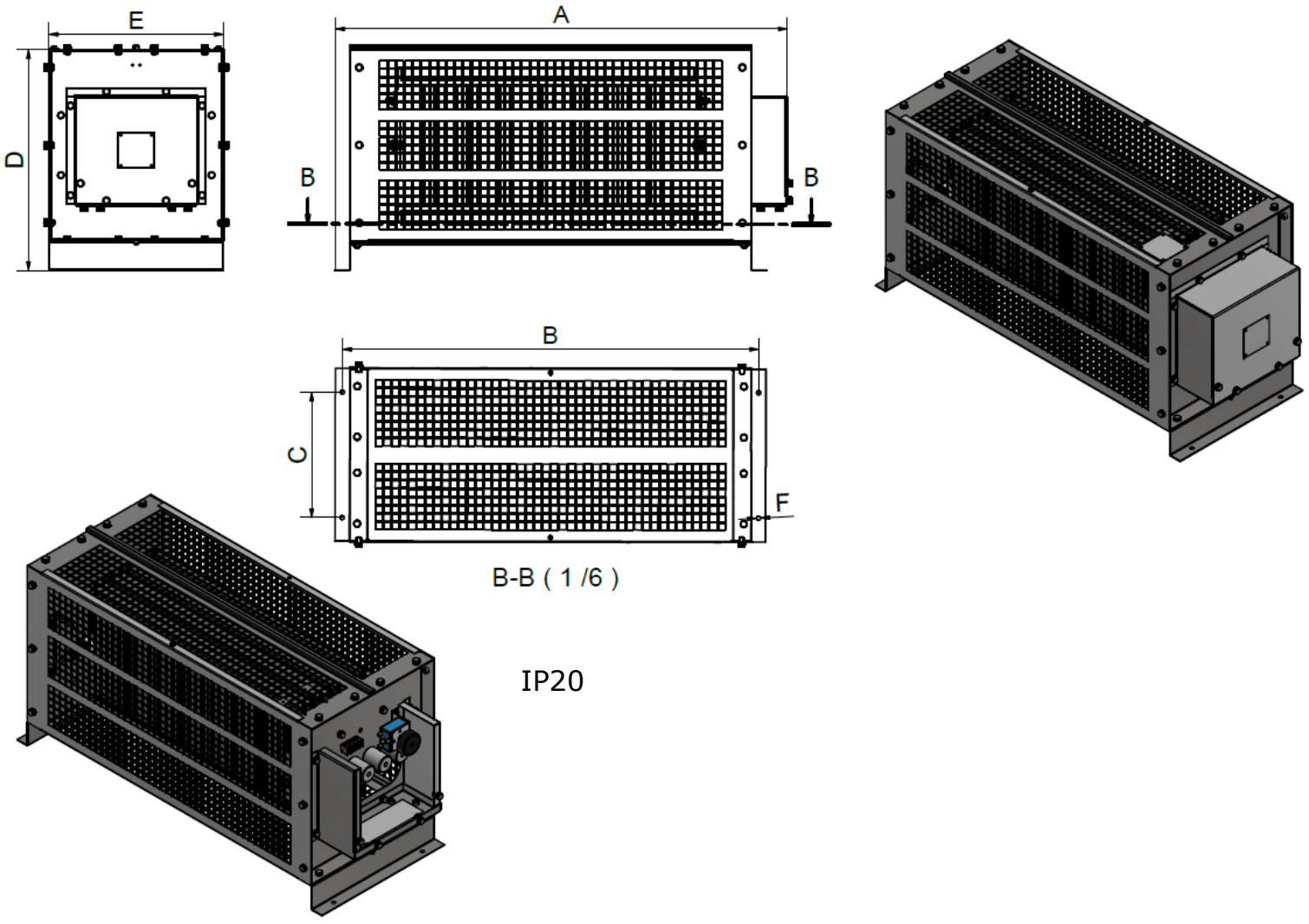
$$Period = T_{on} + T_{off}$$

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

(On Percentage)

ENCLOSURE DIMENSIONS

Enclosure Dimensions: HPBR34-XX and HPBR50-XX. Refer to page 7
Ingress Protection: IP20



IP20

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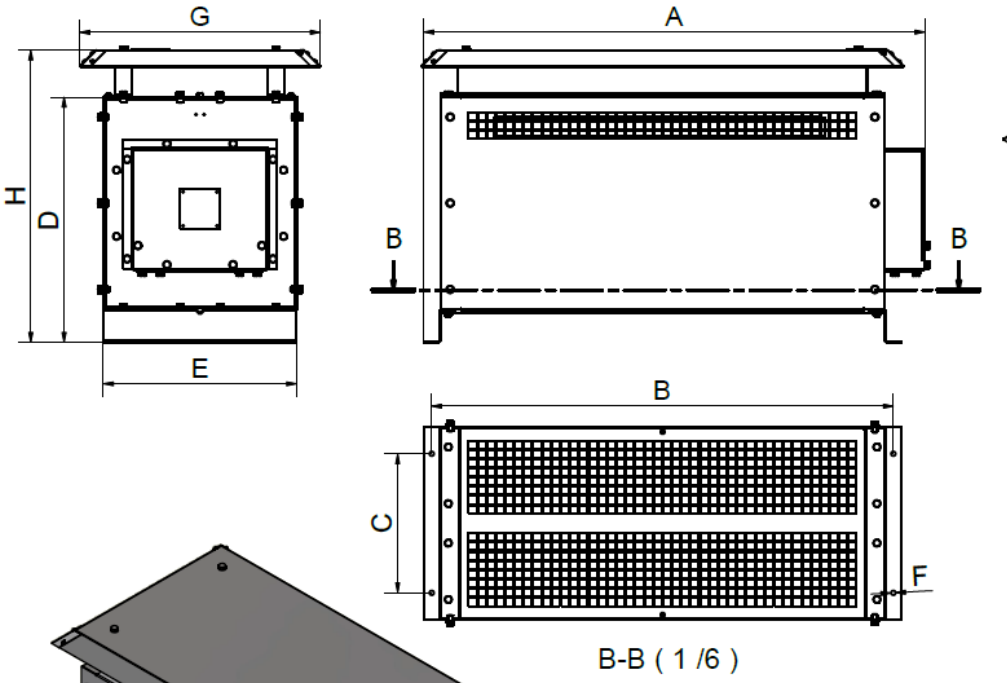
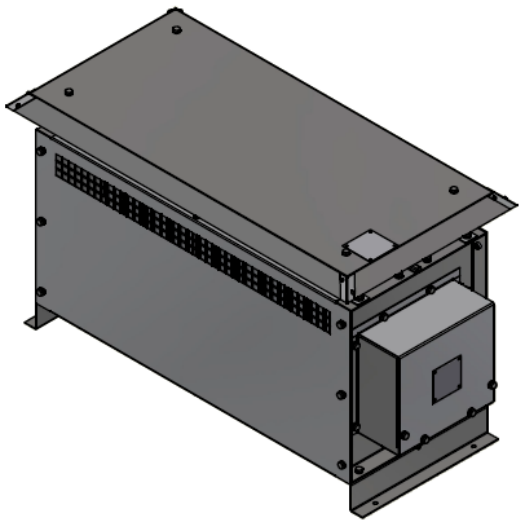
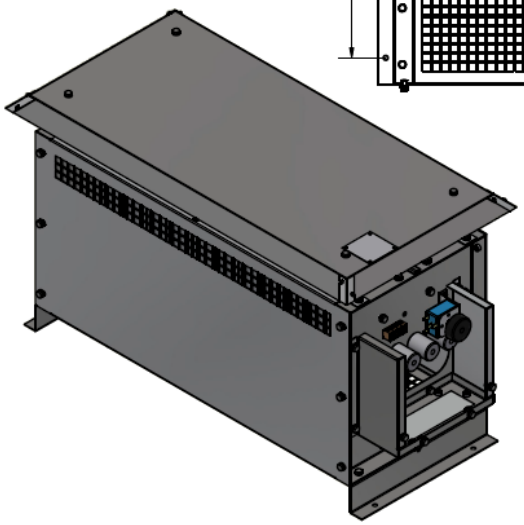
HIGH POWER BRAKE RESISTOR ENCLOSURE DIMENSIONS

Enclosure Dimensions: HPBR34-XX and HPBR50-XX
Ingress Protection: IP22







IP22

TYPE	DIMENSIONS IN mm							
HPBR34-06	A=577	B=510.6	C=150	D=300	E=230	F=Ø7	G=E+90	H=D+70
HPBR34-08								
HPBR34-10								
HPBR34-12								
HPBR50-08	A=756	B=696.6	C=210	D=370	E=292		G=E+90	H=D+70
HPBR50-12			C=290		E=372			
HPBR50-16			C=375		E=457			
HPBR50-20			C=475		E=557			
HPBR50-26			C=595		E=677			
HPBR50-32		B=705	C=710		E=810			