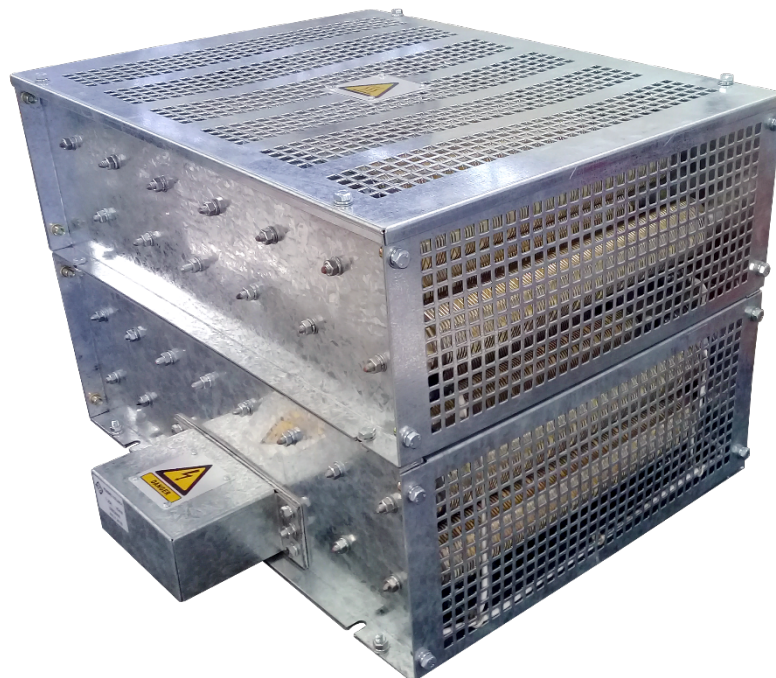


BRAKE RESISTORS

WIRE WOUND ENCLOSED

IP20 and IP22

[Title]



REV	DATE	CHANGE DESCRIPTION	CHANGED BY
0	2020-12-02	• Initial Draft	W. Mitchell

RESISTOR ENCLOSURE TYPE 9522-005**DESCRIPTION: Type 9522-005, 1-3 Tier**

The 9522-005 type enclosed brake resistor is an economical solution for the dynamic braking of electric motors driven by a variable speed/frequency drive (VSD or VFD). The enclosure can be easily mounted directly onto a flat panel, usually on top of the VSD control cabinet where the excess heat may be freely dissipated and away from the drive.

APPLICATIONS

Dynamic braking.

INDUSTRY

Automation, Manufacturing, Mining.

ACTIVE MATERIAL

Wire wound resistors are fitted with high grade CrAl alloy with a very low temperature coefficient.

MECHANICAL CHARACTERISTICS

- Galvanized enclosure. Grade 304 stainless steel is optional.
- The well ventilated side-panels and lid are ideal for rapid heat loss therefore this enclosure can also be used for resistors operating continuously.
- Ingress Protection: IP20.
- Removable terminal cover.

TERMINAL CONNECTIONS

- Two M6 brass threaded stud terminals.
- Cable entry: 20mm Ø hole for Size-0 compression gland.

ELECTRICAL CHARACTERISTICS: Type 9522-005, 1-3 Tier

Voltage Rating	600V	
Maximum Continuous Current	45A	
POWER RATING		
Tier Height	100% Duty	Approximate Power @ 50% Duty
1-Tier	1.6kW	4kW
2-Tier	3.2kW	7kW
3-Tier	4.8kW	9kW
Resistance Tolerance:	+/- 5%	
Resistance and wattage ratings are custom built to our customer requirements.		

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1- TIER RESISTOR ENCLOSURE TYPE 9522-005

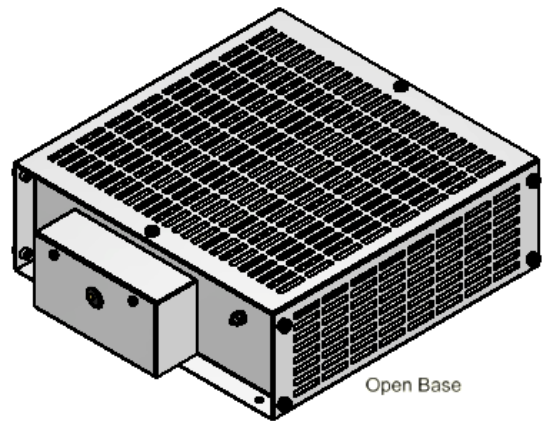
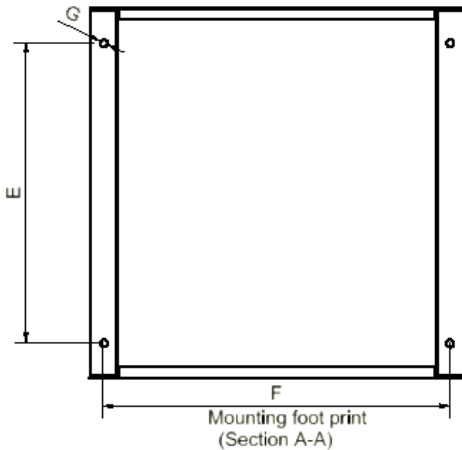
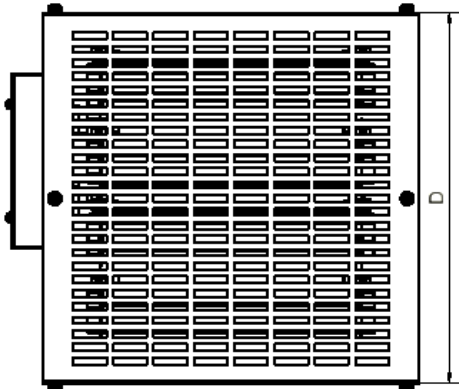
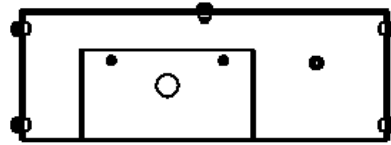
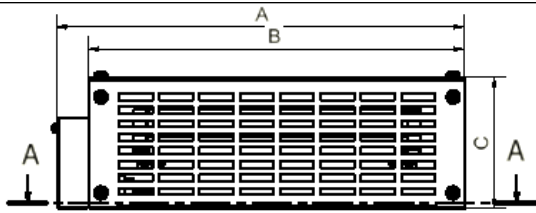


Table	
Column 1	Column 2
A	363mm
B	334mm
C	116.5mm
D	328.5mm
E	266mm
F	309mm
G	Dia 7mm

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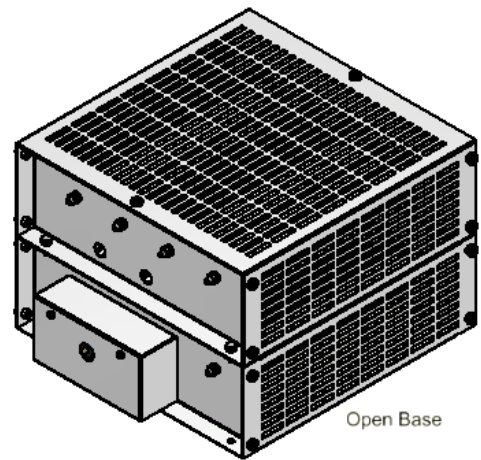
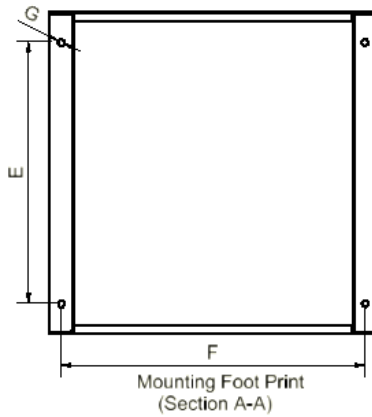
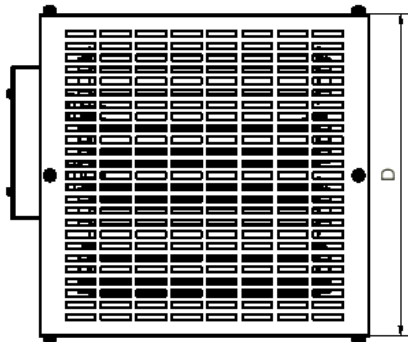
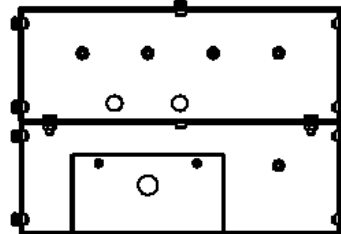
2-TIER RESISTOR ENCLOSURE TYPE 9522-005


Table	
Column 1	Column 2
A	363mm
B	334mm
C	231mm
D	328.5mm
E	266mm
F	309mm
G	Dia 7

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3-TIER RESISTOR ENCLOSURE TYPE 9522-005

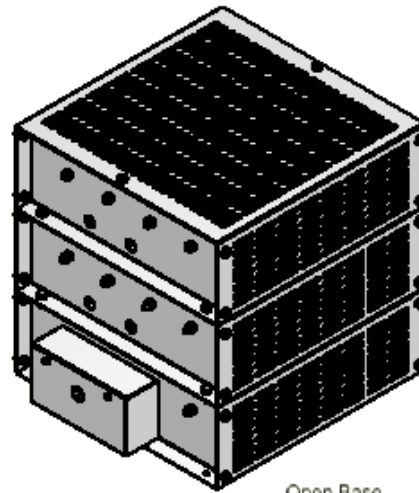
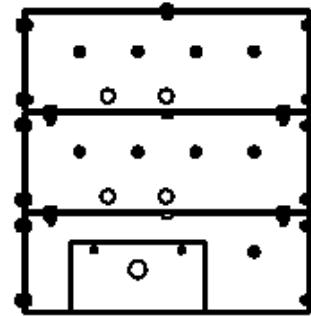
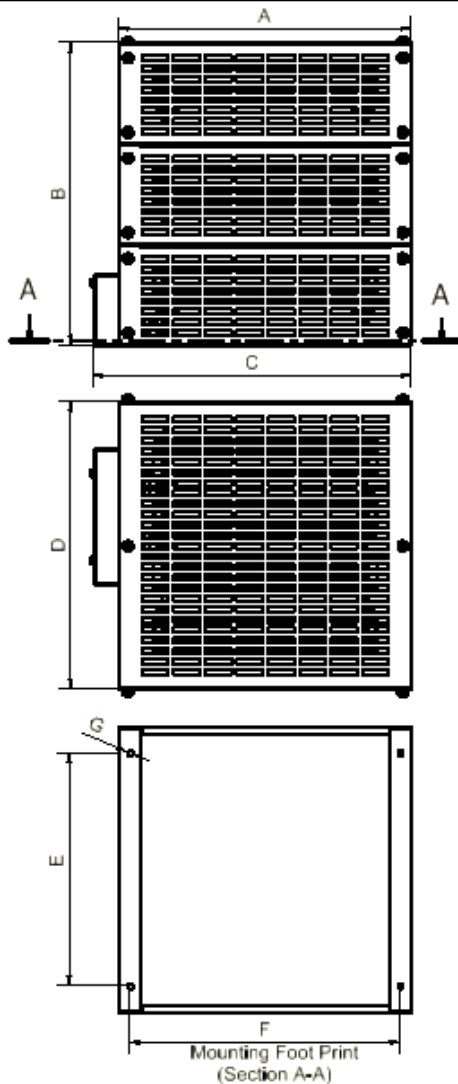


Table	
Column 1	Column 2
A	334mm
B	345mm
C	363mm
D	328.5mm
E	266mm
F	309mm
G	Dia 7mm

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RESISTOR ENCLOSURE TYPE 9522-018

DESCRIPTION: Type 9522-018, 1-3 Tier

The 9522-018 type enclosed brake resistor can dissipate more power than the smaller 9522-005 type enclosure and includes additional features which are stated below. Our customers often require a small enclosure which can dissipate about 3.5kW continuously i.e. 100% duty cycle. The 1-Tier version satisfies this requirement. The enclosure is designed to be mounted directly onto a flat surface, usually on top of the VSD control cabinet where the excess heat may be freely dissipated.

APPLICATIONS

Continuous power dissipation and dynamic braking.

INDUSTRY

Automation, Manufacturing, Mining.

ACTIVE MATERIAL

Wire wound resistors are fitted with high grade CrAl alloy with a very low temperature coefficient.

MECHANICAL CHARACTERISTICS

- Galvanized enclosure. Grade 304 stainless steel is optional.
- The well ventilated side-panels and lid are ideal for rapid heat loss therefore this enclosure is ideal for resistors operating continuously.
- Ingress Protection: Standard IP20. IP22 is optional for this enclosure by means of an additional closed lid.
- Removable terminal cover.

TERMINAL CONNECTIONS

- Two M6 brass threaded stud terminals.
- 2.5mm² terminal strip for temperature switch connection.
- Cable entry: Two 20mm Ø holes for Size-0 compression glands.

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ELECTRICAL CHARACTERISTICS: Type 9522-018, 1-3 Tier	
Voltage Rating	600V
Maximum Continuous Current	45A
Temperature Switch*	1x N/O, N/C contact. Range: 50-300°C
POWER RATING	
Tier Height	100% Duty
1-Tier	3.6kW
2-Tier	6kW
3-Tier	8.1kW
Resistance Tolerance:	+/- 5%
Resistance and wattage ratings are custom built to our customer requirements.	
* The nominal operating temperature must first be measured during normal load conditions to determine the nominal operating temperature. Thereafter the trip-point is set several degrees higher, at the discretion of the customer.	

1-TIER RESISTOR ENCLOSURE TYPE 9522-018

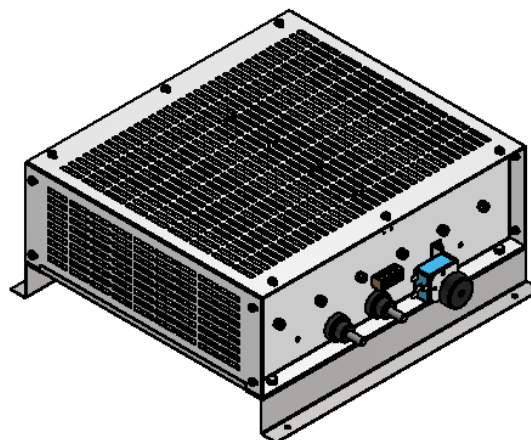
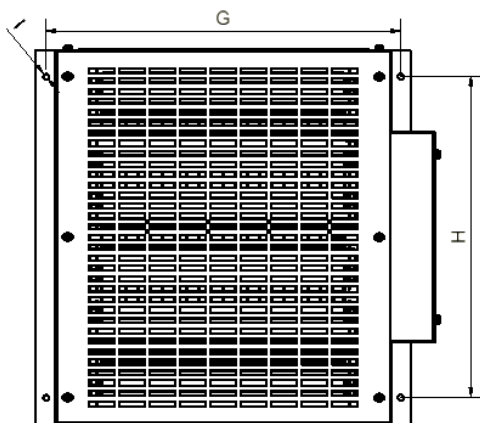
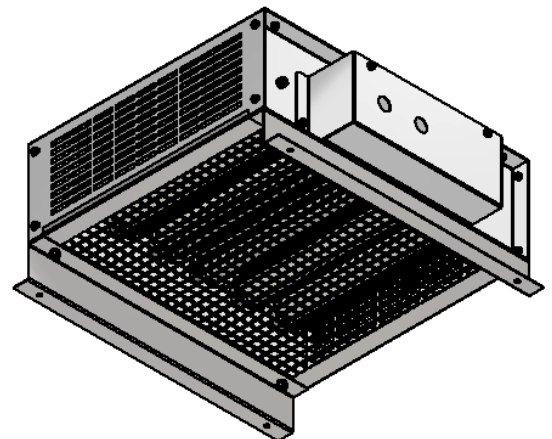
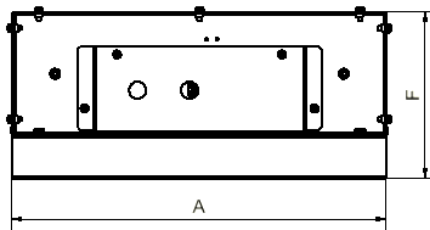
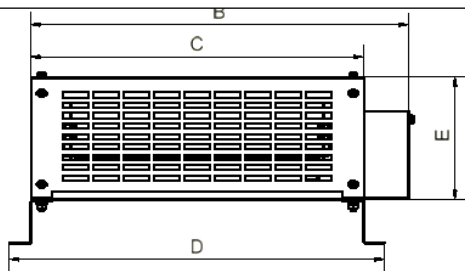


Table	
Column 1	Column 2
A	431mm
B	436mm
C	384mm
D	432.5mm
E	142mm
F	192mm
G	408.5mm
H	370mm
I	Dia 7

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RESISTOR ENCLOSURE TYPE 9522-012 1.5kV**DESCRIPTION: Type 9522-012, 1-2 Tier**

The 9522-012 type enclosed brake resistor is especially designed to handle high DC bus voltages of a VSD up to 1.5kV. Double insulation and sufficient clearance distances between active materials and the enclosure ensure the prevention of voltage arcing and protection to the VSD. Additional features are included which are stated below.

The standard ingress protection degree is IP22.

APPLICATIONS

Single or three-phase continuous power dissipation or dynamic braking.

INDUSTRY

Automation, Manufacturing, Mining.

ACTIVE MATERIAL

Wire wound resistors are fitted with high grade CrAl alloy with a very low temperature coefficient.

MECHANICAL CHARACTERISTICS

- Galvanized enclosure. Grade 304 stainless steel is optional.
- The well ventilated side-panels and raised lid are ideal for rapid heat loss therefore this enclosure is also ideal for resistors operating continuously.
- Ingress Protection: Standard IP22.
- Removable terminal cover to access resistor connections and temperature switch terminals.

TERMINAL CONNECTIONS

- Three M10 brass threaded stud terminals.
- The three terminals allow for the option of using this enclosure for a small three-phase dummy load, ideally connected in a star-formation.
- 2.5mm² terminal strip for temperature switch connection.
- Cable entry: Two 20mm Ø holes for Size-0 compression glands.

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ELECTRICAL CHARACTERISTICS: Type 9522-012, 1-2 Tier	
Voltage Rating	1.5kV DC
Maximum Continuous Current	80A
Temperature Switch*	1x N/O, N/C contact. Range: 50-300°C
Resistor configuration	Two terminal single-phase. Three terminal three-phase.
POWER RATING	
Tier Height	100% Duty
1-Tier	2.4kW
2-Tier	4.5kW
Resistance Tolerance:	+/- 5%
Resistance and wattage ratings are custom built to our customer requirements.	
* The nominal operating temperature must first be measured during normal load conditions to determine the nominal operating temperature. Thereafter the trip-point is set several degrees higher, at the discretion of the customer.	

1 TIER RESISTOR ENCLOSURE TYPE 9522-012

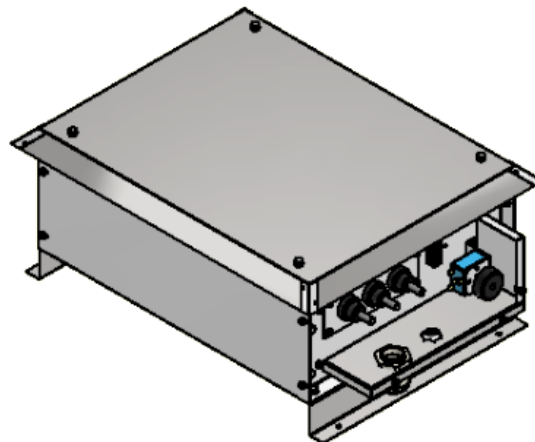
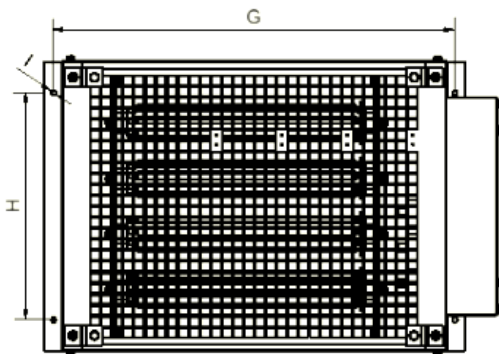
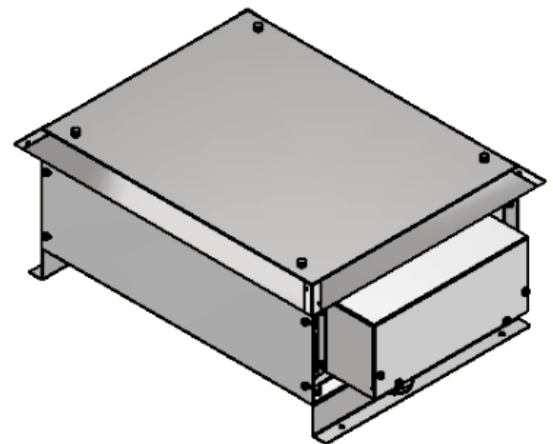
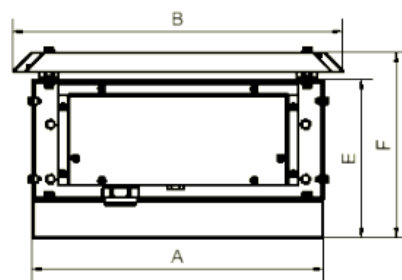
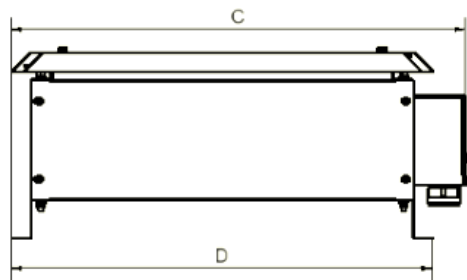
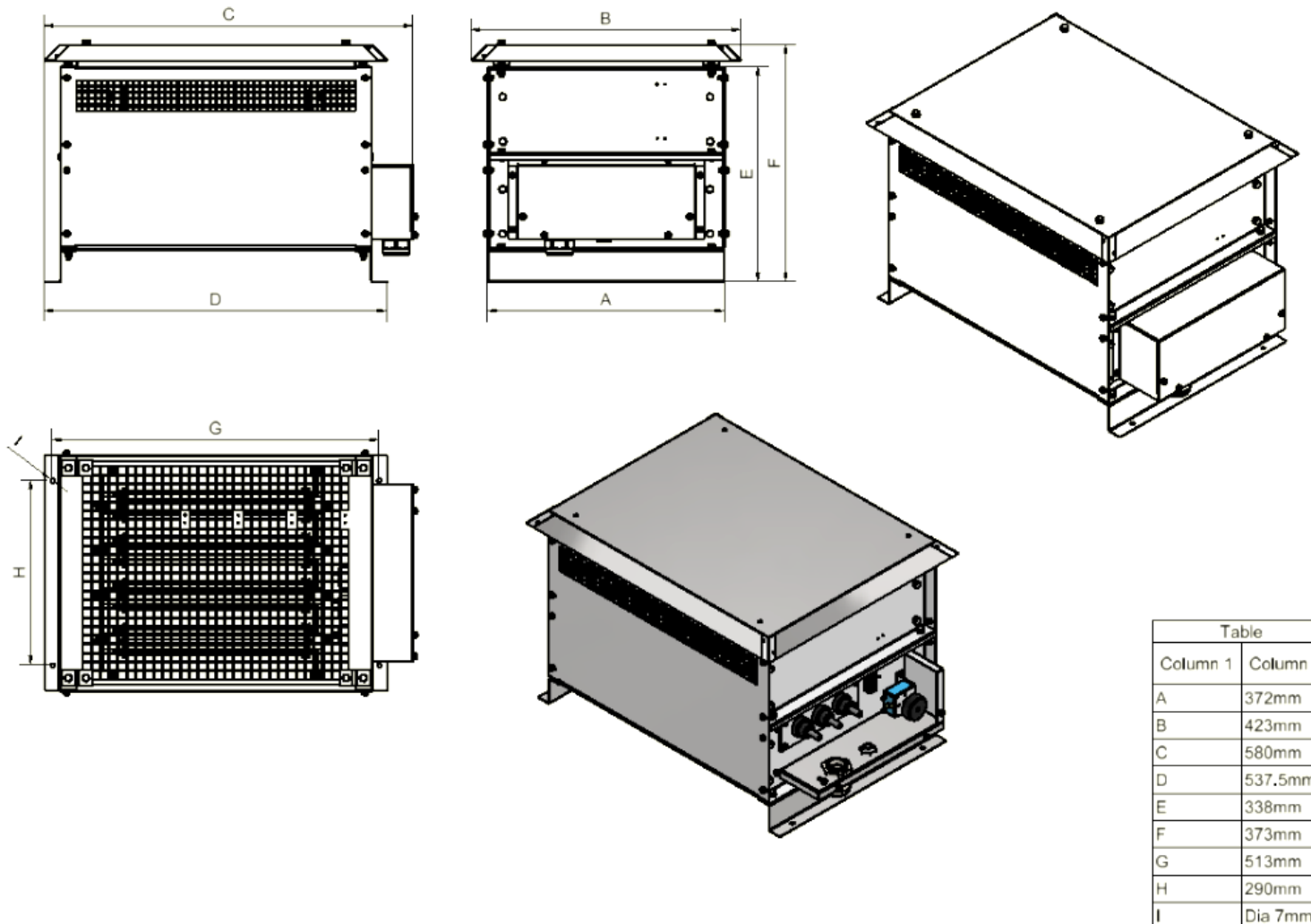


Table	
Column 1	Column 2
A	372mm
B	423mm
C	580mm
D	537.5mm
E	203mm
F	238mm
G	513mm
H	290mm
I	Dia 7mm

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2- TIER RESISTOR ENCLOSURE TYPE 9522-012


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RESISTOR ENCLOSURE TYPE 9522-007 1-4 TIER**DESCRIPTION: Type 9522-007, 1-4 Tier**

The 9522-007 type enclosed brake resistor is our enclosure capable of dissipating continuous loads up to 18kW.

Loads of this power rating are commonly used for large hoist applications whereby this enclosure can also be fitted into a well-designed IP23 enclosure.

APPLICATIONS

Single-phase continuous power dissipation or dynamic braking.

INDUSTRY

Automation, Manufacturing, Mining, Hoist and Crane control.

ACTIVE MATERIAL

Wire wound resistors are fitted with high grade CrAl alloy with a very low temperature coefficient.

MECHANICAL CHARACTERISTICS

- Galvanized enclosure. Grade 304 stainless steel is optional.
- The well ventilated side panels and raised lid are ideal for rapid heat loss therefore this enclosure is also ideal for resistors operating continuously.
- Ingress Protection: Standard IP20. Additional IP23 enclosure is optional.

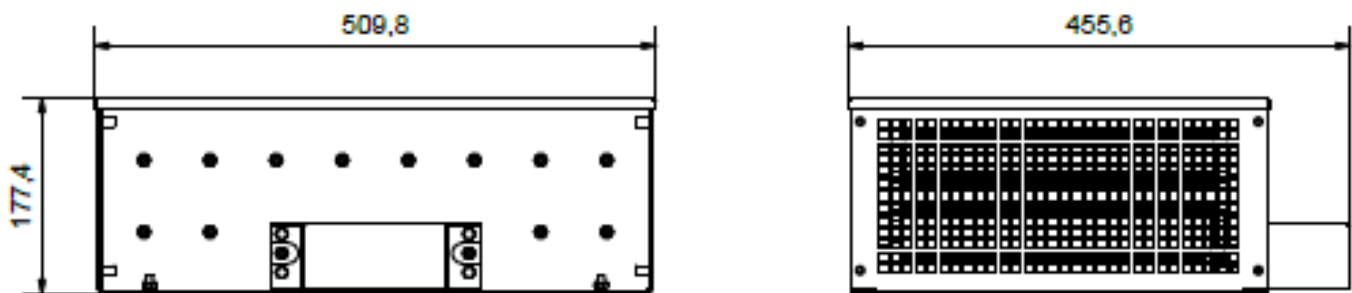
TERMINAL CONNECTIONS

- Two M10 brass threaded stud terminals.
- Cable entry: Underside of terminal cover.

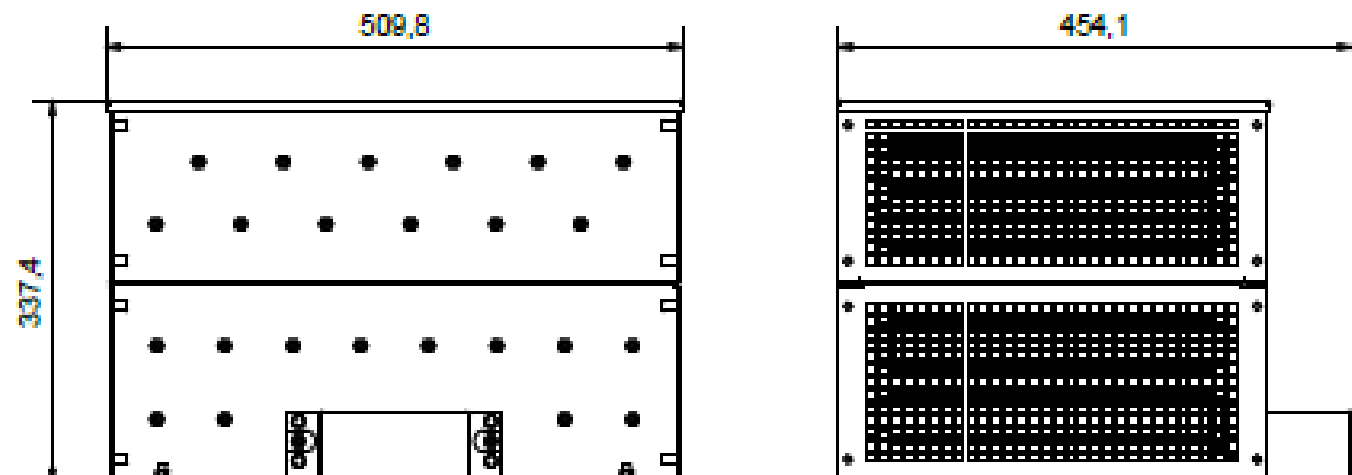
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ELECTRICAL CHARACTERISTICS		
Voltage Rating	600V	
Maximum Current	80A	
POWER RATING		
Tier Height	100% Duty	Approximate Power @ 50% Duty
1-Tier	6kW	10kW
2-Tier	12kW	20kW
3-Tier	14.5kW	30kW
4-Tier	18kW	40kW
Resistance Tolerance:	+/- 5%	
Resistance and wattage ratings are custom built to our customer requirements.		

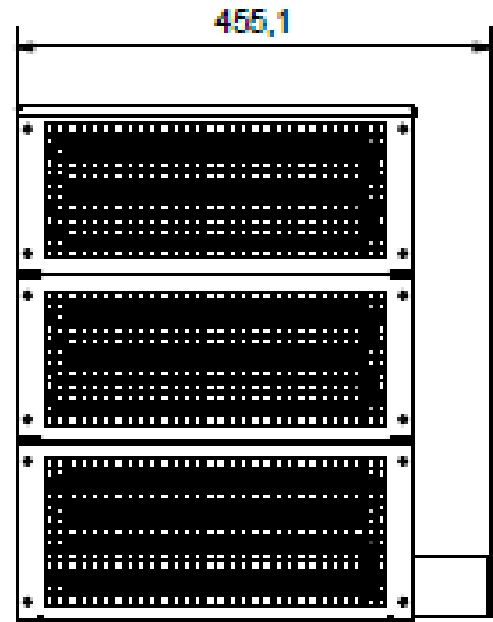
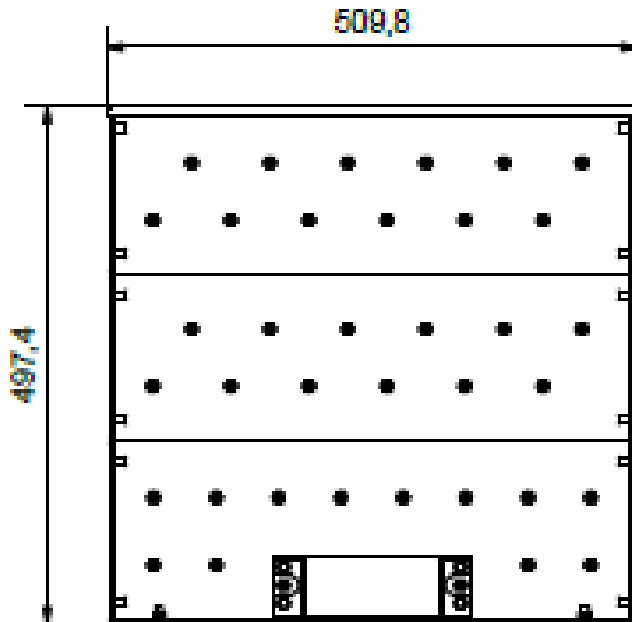
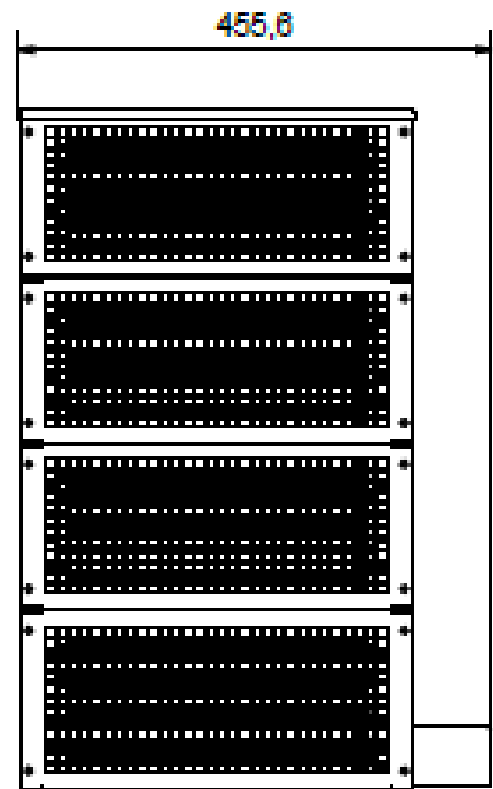
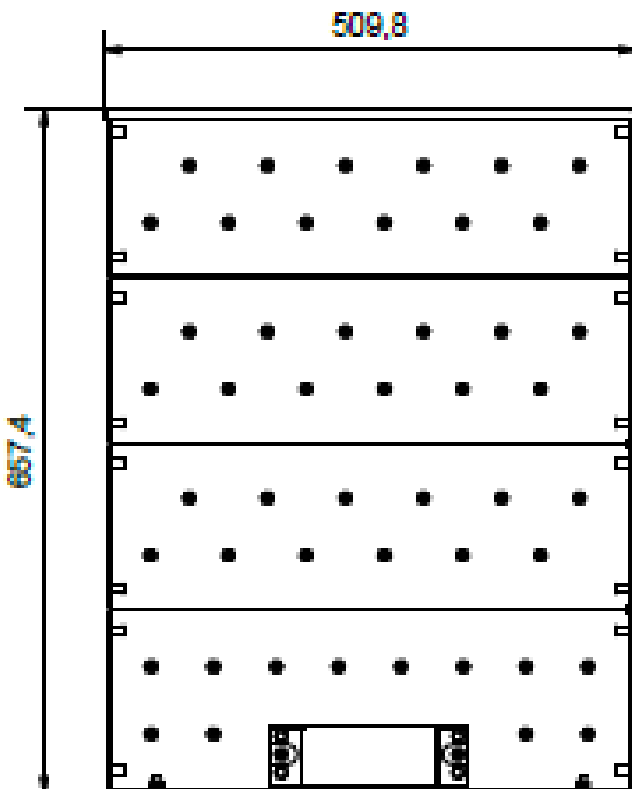
RESISTOR ENCLOSURE TYPE 9522-007 1 TIER



RESISTOR ENCLOSURE TYPE 9522-007 2 TIER



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RESISTOR ENCLOSURE TYPE 9522-007 3 TIER

RESISTOR ENCLOSURE TYPE 9522-007 4 TIER


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