

SWITCH-MODE RECTIFIERS FOR SURFACE TREATMENTS

COMMERCIAL BOOKLET - JUNE 2024



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CRS PRODUCT SERIES



S075	DESKTOP VERSION	4 - 5
S075	WALL VERSION	



Q100		6 - 7
Q150	DESKTOP VERSION	8 - 9
Q150	RACK VERSION	10 - 11
Q150	VERTICAL VERSION	12 - 13
Q150	WALL VERSION	14 - 15
Q300		16 - 17
Q500B		18 - 19



V700		20 - 21
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OPTIONS

1	COMMUNICATION ADAPTERS	22 - 23
2	ANALOGUE INTERFACE	
3	MULTI-TOWER INTERCONNECTION	
4	REMOTE CONTROL	
5	WATER COOLING SYSTEM IN COPPER	
6	WATER FLOW SENSOR AND SOLENOID	
7	SOLENOID	

FOCUS ON

VEGA CABINETS	24
V820 & V810	



S075 - AIR COOLED

**SINGLE
PHASE**

- Single phase rectifier
- 750W or 1500W per unit
- Desktop and Wall versions
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available

S075D - DESKTOP VERSION



BACK VIEW



S075W - WALL VERSION

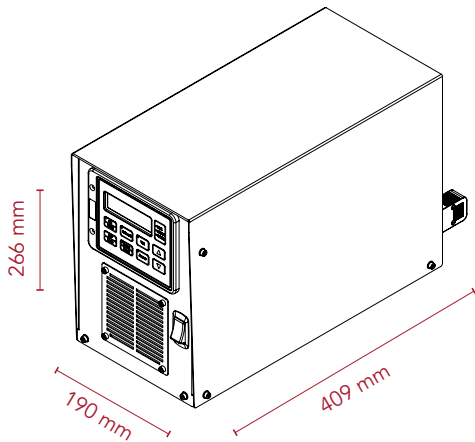


BOTTOM VIEW

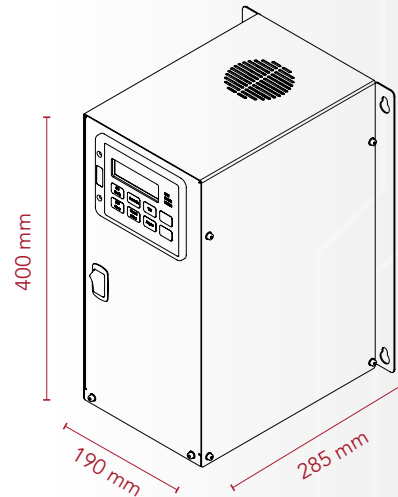




DIMENSIONS



S075D - DESKTOP VERSION



S075W - WALL VERSION

OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL

S075 TECHNICAL SPECIFICATION - DESKTOP AND WALL

Main voltage (Single Phase)	120 - 230 VAC \pm 10% / 50-60 Hz
Max. output voltage	5 - 160 VDC
Max. output current	125A DC (750W) / 250A DC (1500W)
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	0.70 @ rated load (standard) >0.95 @ rated load (with optional PFC)
Efficiency	up to 92% @ rated load
Color	RAL 3004
Cooling	Air
Degree of protection	IP31 Air cooled
Weight	Max. 11 kg
Ambient temperature	40°C

Quasar
100

UP TO
500A

Q100 - AIR AND WATER COOLED

- Space saving
- Rack mountable
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



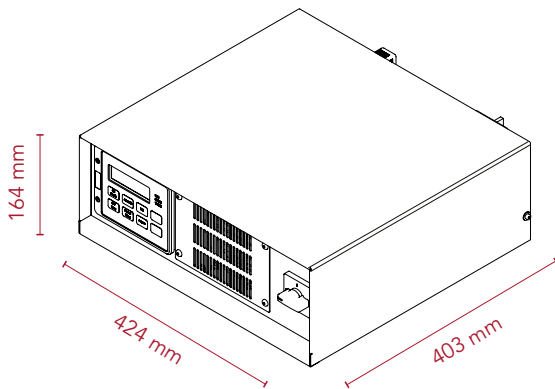
AIR COOLED VERSION

BACK VIEW - AIR COOLED VERSION





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 5** WATER COOLING SYSTEM IN COPPER



RACK VERSION

Q100 TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 160 VDC
Max. output current	10 - 500 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP31 Air cooled IP42 Water cooled
Weight	Max. 25 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 28°C (up to 35°C on request)



Q150D - AIR AND WATER COOLED

UP TO
1000A

- 600A Air cooled / 1000A Water cooled
- Space saving
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



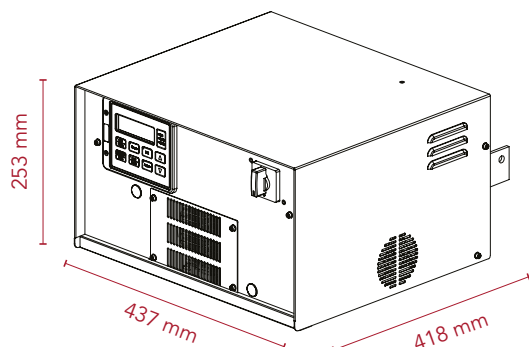
AIR COOLED VERSION

BACK VIEW - AIR COOLED VERSION





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 6** WATER FLOW SENSOR AND SOLENOID

Q150D TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 160 VDC
Max. output current	10 - 500 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP31 Air cooled IP42 / IP54 Water cooled
Weight	Max. 35 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 28°C (up to 35°C on request)



Q150R - AIR AND WATER COOLED

**7U HEIGHT
19" STANDARD
RACK**

- 600A Air cooled / 1000A Water cooled
- Space saving
- Rack mountable
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



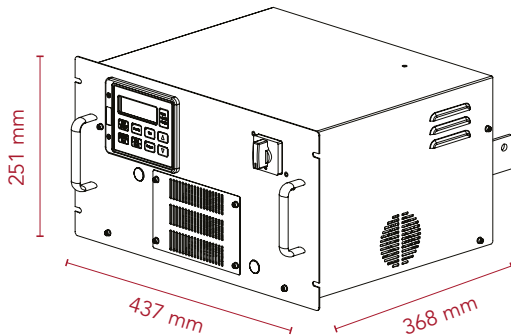
WATER COOLED VERSION

BACK VIEW - WATER COOLED VERSION





DIMENSIONS



RACK VERSION

OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 6** WATER FLOW SENSOR AND SOLENOID

Q150R TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 160 VDC
Max. output current	10 - 500 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP31 Air cooled IP42 / IP54 Water cooled
Weight	Max. 35 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 28°C (up to 35°C on request)

Quasar
150V

Q150V - AIR AND WATER COOLED

UP TO
1000A

- 600A Air cooled / 1000A Water cooled
- Space saving
- Vertical option
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



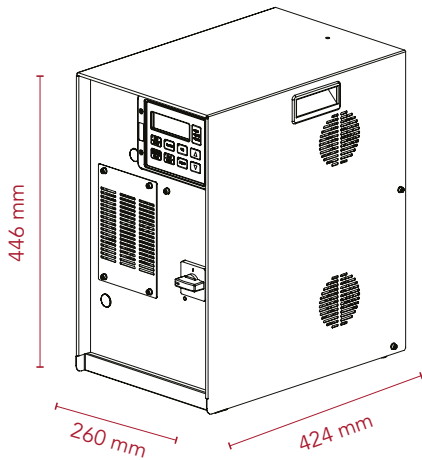
AIR COOLED VERSION

BACK VIEW - AIR COOLED VERSION





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 6** WATER FLOW SENSOR AND SOLENOID

Q150V TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 160 VDC
Max. output current	10 - 500 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP31 Air cooled IP42 / IP54 Water cooled
Weight	Max. 35 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 28°C (up to 35°C on request)

Quasar
150W

Q150W - AIR AND WATER COOLED

UP TO
1000A

- 600A Air cooled / 1000A Water cooled
- Space saving
- Wall installation for better use of space
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



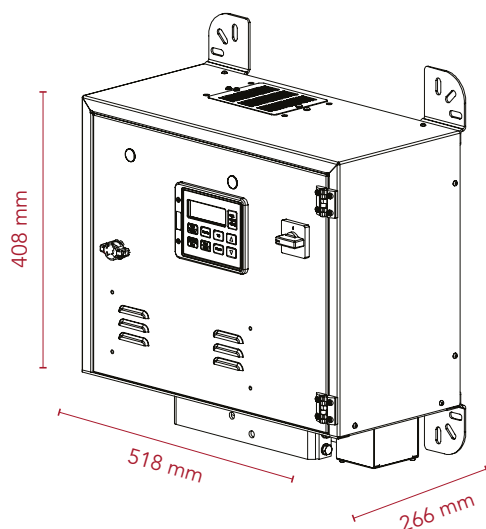
AIR COOLED VERSION

BOTTOM VIEW - AIR COoled VERSION





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 6** WATER FLOW SENSOR AND SOLENOID

Q150W TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 160 VDC
Max. output current	10 - 500 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP31 Air cooled IP42 / IP54 Water cooled
Weight	Max. 35 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 28°C (up to 35°C on request)



Q300 - AIR COOLED

UP TO
1800A

- Space saving
- Medium power for small production lines
- Affordable air cooled solution
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available

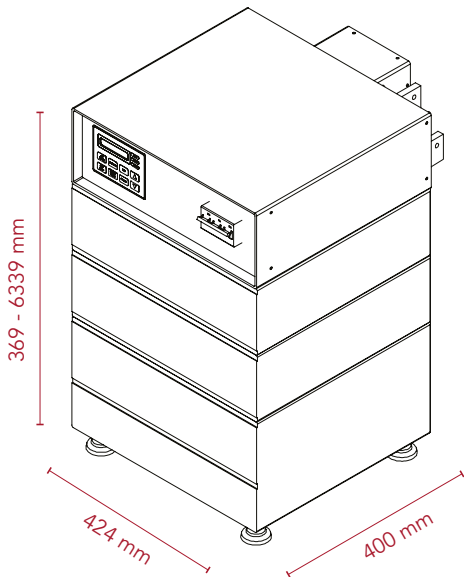


BACK VIEW





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL

Q300 TECHNICAL SPECIFICATION

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 450 VDC
Max. output current	22 - 1800 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air
Degree of protection	IP21 Air cooled
Weight	45 - 89 kg
Ambient temperature	40°C (up to 50°C on request)



Q500B - AIR AND WATER COOLED

- Space saving
- Higher power for production lines
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



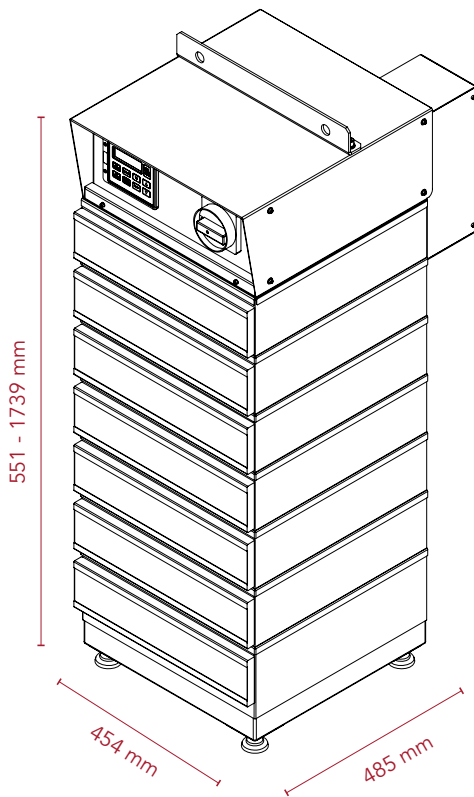
AIR COOLED VERSION

BACK VIEW - AIR COOLED VERSION





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 5** WATER COOLING SYSTEM IN COPPER
- 6** WATER FLOW SENSOR AND SOLENOID

Q500B TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	5 - 450 VDC
Max. output current	22 - 8000 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP32 / IP52 / IP54 Air cooled IP42 / IP54 / IP65 Water cooled
Weight	79 - 308 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 28°C (up to 35°C on request)

V700 - AIR AND WATER COOLED



- Space saving
- Higher power for production lines
- Water flow sensor included
- Manual or automatic controlled
- Ah counter, ramp software and more
- Ease of service
- Expandable for more power
- Reverse polarity
- Pulse plating available



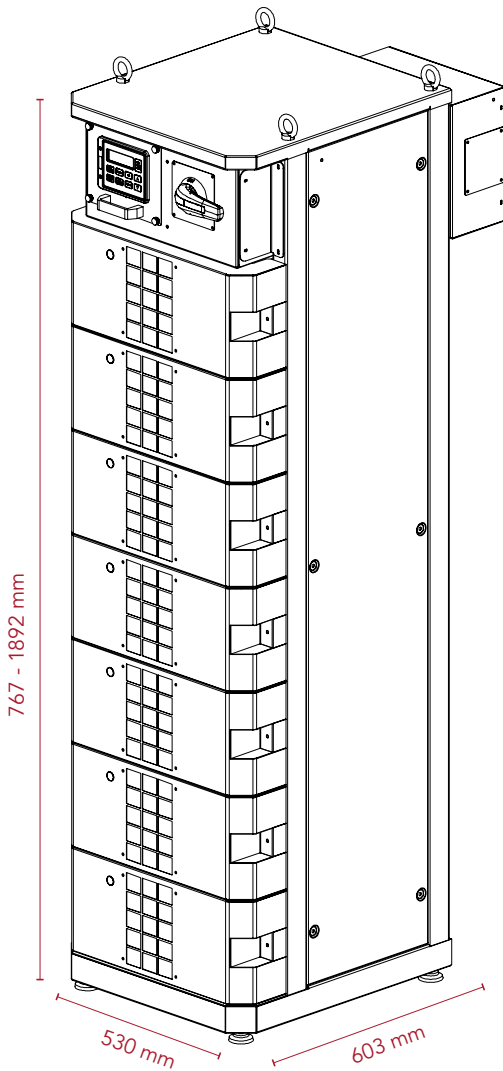
WATER COOLED VERSION

BACK VIEW - WATER COOLED VERSION





DIMENSIONS



OPTIONS (SEE OPTIONS PAGE)

- 1** COMMUNICATION ADAPTERS
- 2** ANALOGUE INTERFACE
- 3** MULTI-TOWER INTERCONNECTION
- 4** REMOTE CONTROL
- 7** SOLENOID

V700 TECHNICAL SPECIFICATION (AIR AND WATER COOLED)

Main voltage (3 Phase)	208 - 230 - 400 - 440 - 480 - 575 VAC ± 10% / 50-60 Hz
Max. output voltage	6 - 500 VDC
Max. output current	1200 - 10500 A DC
Current ripple	<2% (<1% on request)
Operation mode	Current or voltage control
Current regulation range	2 - 100%
Voltage regulation range	5 - 100%
Accuracy	1% of full scale
Power factor	>0.95 @ rated load
Efficiency	89-94% @ rated load
Color	RAL 3004
Cooling	Air and Water
Degree of protection	IP32 Air cooled IP42 / IP54 Water cooled
Weight	79 - 450 kg
Ambient temperature	40°C (up to 50°C on request)
Input water cooling temperature	19 - 35°C

OPTIONS

1 COMMUNICATION ADAPTERS



Profibus-DP



Devicenet

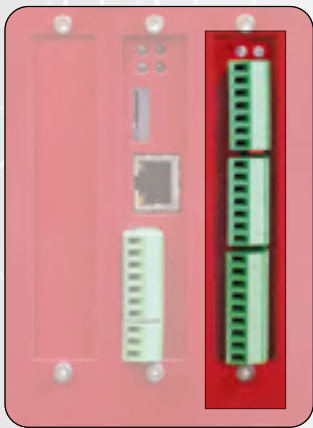


Profinet
Ethernet-IP
Modbus/TCP



Modbus-RTU
Computer port

2 ANALOGUE INTERFACE



Provides digital and analogue I/O to control the rectifier.
Ready for 0-10V or 4-20mA signal.

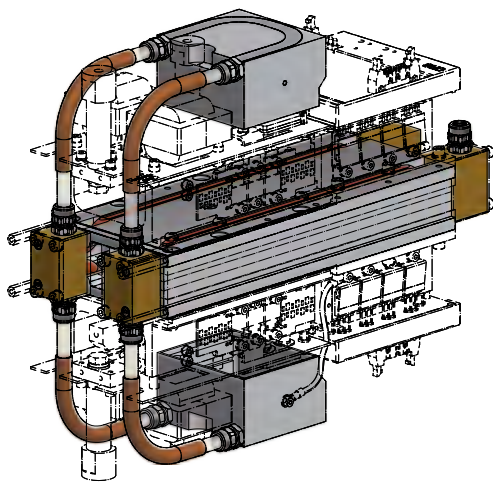
3 MULTI-TOWER INTERCONNECTION



Adapter for a multi-tower system.
Towers of different model, type and size can be mixed together.
Towers are inter-connected via daisy-chain, by an RJ45 cable.

4 REMOTE CONTROL

Small optimized remote controls with Ah counter, ramp function, time control and more.



5 WATER COOLING SYSTEM IN COPPER

Water cooling system without aluminum parts. Enhanced reliability and robustness of the cooling circuit

6 WATER FLOW SENSOR AND SOLENOID

The internal adjustable flow sensor assures minimum required flow rate and report low water flow rate alarm.

The external solenoid can be used to stop the circulation of cold water when rectifier is in stand-by, thus reducing potential condensation.



7 SOLENOID

The external solenoid can be used to stop the circulation of cold water when rectifier is in stand-by, thus reducing potential condensation.

V820 & V810 - AIR AND WATER COOLED



- Output power up to:
360 KW for water cooled rectifier
300 KW for air cooled rectifier

V820

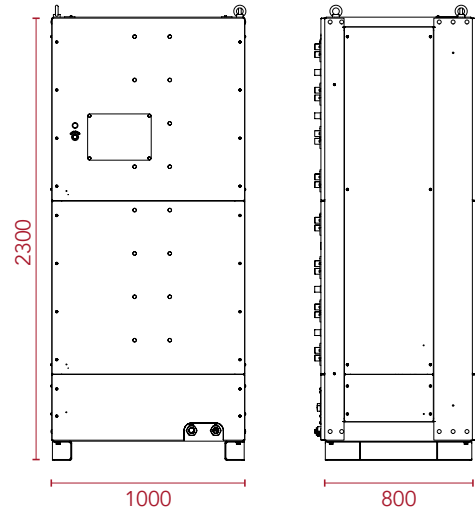


V810

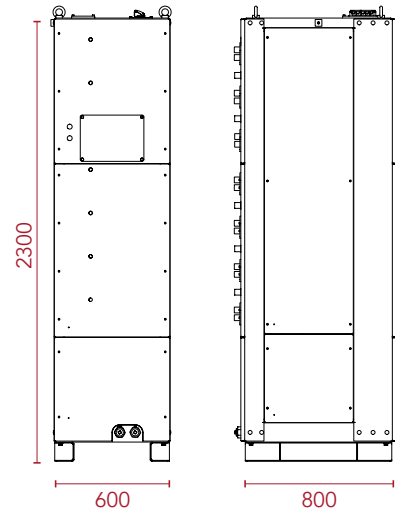


OVERALL DIMENSION FOR AIR AND WATER COOLED

V820



V810



OPEN VIEW



Easy to service; power modules, CPU module and heat exchanger can be easily removed and re-installed with access from the front only. All the connections face the front of the rectifier, easy to access through the plexiglass panel.



CRS LOCATIONS



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EQUIPMENT

Our policy is of steady improvement.
We reserve the right to change
the technical specifications of the machines
in this catalogue without previous notice.

