

## Industrial Power Equipment

- ENERGY SAVING
- SPACE SAVING
- MODULAR POWER PLATFORM
- MULTI-TOWER INTERCONNECTION
- FAST RESPONSE TIME
- HIGH STABILITY TO LOAD VARIATION
- RS485 SERIAL COMMUNICATION INCLUDED
- HIGH POWER FACTOR (> 0.9)
- HIGH EFFICIENCY (> 89%)
- VERY LOW CURRENT RIPPLE
- OUTPUT STABLE PARAMETERS



**Q100**  
IP31



**Q300**  
NEMA12



**Q300**  
IP21



**Q500**  
IP42



**Q500**  
IP32



**Q500**  
IP65



Q-Series switch-mode rectifiers are designed to meet all galvanic surface treatment requirements. Based on high speed IGBT technology, they provide high efficiency and performance. Compact dimensions and reduced weight versus conventional rectifiers without compromising reliability.



From a unit of 50A to 500A...

... to a powerful installation  
of 42,000A



**Q**  
**100**  
Switch-mode  
Rectifiers

- Air Cooled - IP31
- Water Cooled - IP43
- 1 power module / reverse module
- Available in all types:  
DC - Direct Current / DCR - Reverse of polarity  
PP - Pulsed / PPR - Pulsed with Reverse of polarity



- Sizes: 50A / 100-150A / 200-250A / 300A / 400A / 500A
- Available with buzzer and push button for E-coat applications



17 in.  
Base  
17 in.

Configuration:  
Height:

01	
6	in.
<hr/>	
55	lbs.
55	lbs.

Weight - air cooled:  
Weight - water cooled:

**Q**  
**300**  
Switch-mode  
Rectifiers

- Air Cooled - IP21
- Up to 3 power modules / reverse modules
- Available in all types:  
DC - Direct Current  
DCR - Reverse of polarity  
PP - Pulsed  
PPR - Pulsed with Reverse of polarity



- Sizes: Config 01-1 up to 550A DC / 250A DCR  
Config 02-2 up to 1100A DC / 550A DCR  
Config 03-3 up to 1700A DC / 1100A DCR
- Available in IP52 (NEMA 12)



17 in.  
Base  
17 in.

Configuration:  
Height:

01-1	02-2	03-3
14.5 in.	20 in.	25 in.
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99 lbs.	152 lbs.	196 lbs.
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-	-	-

Weight - air cooled:  
Weight - water cooled:



**Q500**  
Switch-mode  
Rectifiers

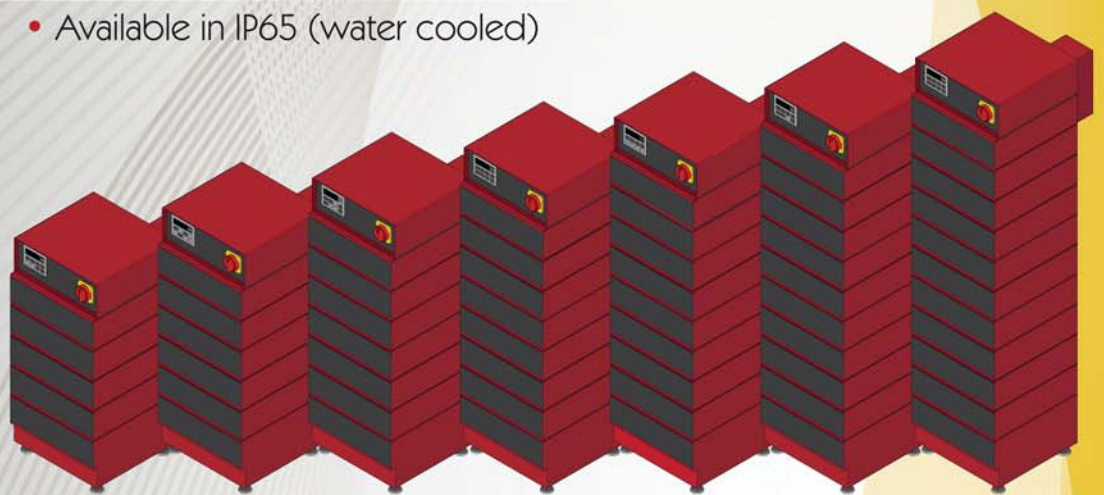


17 in.  
Base  
17 in.

Configuration:  
Height:

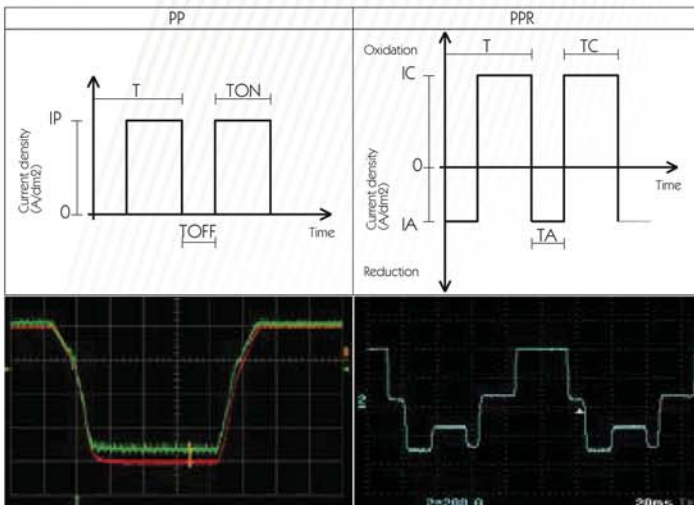
Weight - air cooled:  
Weight - water cooled:

- Air Cooled - IP32
- Water Cooled - IP42
- Up to 9 power modules / reverse modules
- Available in all types:  
DC - Direct Current  
DCR - Reverse of polarity  
PP - Pulsed  
PPR - Pulsed with Reverse of polarity
- Up to 8000A in one tower.  
Multi-tower expansion for higher requirement
- Available in IP65 (water cooled)



05	06	07	08	09	10	11
35.5 in.	40.5 in.	46 in.	51 in.	56 in.	61.5 in.	66.5 in.
315 lbs.	359 lbs.	403 lbs.	448 lbs.	492 lbs.	536 lbs.	589 lbs.
353 lbs.	406 lbs.	459 lbs.	511 lbs.	564 lbs.	617 lbs.	675 lbs.

## Pulse Plating & Pulse Anodizing



- Available in all models Q100/Q300/Q500
- Up to 50% energy saving
- 30% less process time for the same deposit thickness
- Increase temperature of anodizing solution due to the reduction of oxidation voltage
- Reduced barrier-layer
- Pulses help avoid burned parts and improve surface uniformity
- Same rectifier can be used for anodizing and coloring
- Different programmable waveform for different process applications

# Rectifier options

<p><b>COMMUNICATION ADAPTERS</b></p>  <ul style="list-style-type: none"> <li>• Communication adapters for Profibus-DP, DeviceNet, Profinet, EthernetIP, Modbus/TCP networks</li> </ul>	<p><b>REMOTE CONTROL</b></p>  <ul style="list-style-type: none"> <li>• REM is a remote control unit that communicates with the rectifier</li> </ul>	<p><b>4-LINE DISPLAY</b></p> 
<p><b>ANALOGUE INTERFACE</b></p>  <ul style="list-style-type: none"> <li>• ANL provides 6 digital inputs and 6 outputs and 2 analogue inputs and 2 outputs</li> </ul>	<p><b>INPUT/OUTPUT SCREW INTERFACE</b></p>  <ul style="list-style-type: none"> <li>• Replaces the junction box</li> <li>• Easy installation</li> </ul>	<ul style="list-style-type: none"> <li>• Simultaneous display of 4 lines of data</li> <li>• Immediate display of messages</li> <li>• Easier to read</li> <li>• Remotable up to 4 meters</li> <li>• Available parameters:             <ul style="list-style-type: none"> <li>- Measured Value</li> <li>- Set point values and messages</li> <li>- Ramp time / Phase time</li> <li>- Partial AH / Partial limit AH</li> <li>- Total AH / Total limit AH</li> <li>- Grand Total AH</li> </ul> </li> </ul>
<p><b>WATER FLOW SENSOR AND SOLENOID</b></p>  <p>Interface board</p> <p>Solenoid</p> <p>Flow Sensor</p> <ul style="list-style-type: none"> <li>• Water cooled rectifier optional for low flow rate alarm</li> <li>• Features:             <ul style="list-style-type: none"> <li>- adjustable Flow Sensor to assure minimum required flow rate</li> </ul> </li> <li>• Benefits:             <ul style="list-style-type: none"> <li>- assures minimum water flow rate</li> <li>- solenoid can be used to stop circulation of cold water when rectifier is in stand-by, thus preventing potential condensation</li> </ul> </li> </ul>	<p><b>CTRD02</b></p>  <ul style="list-style-type: none"> <li>• Recommended for voltage controlled processes</li> <li>• Fast feedback loop and fully differential output feedback:             <ul style="list-style-type: none"> <li>- Lower Current Output Ripple (especially 300 Hz)</li> <li>- Reduced Voltage output ripple from 10% to 3% (in voltage mode operation)</li> </ul> </li> </ul>	
<p><b>RECTIFIER SIMULATOR</b></p>  <ul style="list-style-type: none"> <li>• Test the rectifier behavior without the need of a real rectifier</li> <li>• Use the panel keyboard, the analog card or every one of the available communication protocols (Modbus, ASCII, Profibus-DP, DeviceNet, Profinet, EthernetIP, Modbus/TCP)</li> </ul>		