



Manufactured and Developed in the USA

Ripple is a byproduct of converting AC to DC. Ripple is superimposed on top of the DC output Voltage. Typically this can be greater than 5% when operating less than 100%kW on a SCR DC Power Supply. This is inherent with the SCR's chopping up the waveform. Ripple can vary depending on the type of rectifier. Processes such as Precious Metals, Tin, Chrome, as well as Aerospace Applications will require ripple better than 5% from 20-100%kW! Aldonex can offer internal filter chokes or external chokes. Internal Chokes are typically built into new equipment at the time of order. All of our external chokes are enclosed in a rust-proof poly enclosure with a rating of at least NEMA12!

FEATURES INCLUDE:

- Applications are available from 10ADC to 15000ADC (>15,000ADC available upon request)
- Aldonex filter chokes be "built in" to new equipment or installed externally as an "add-on" unit
- Enclosed or non-enclosed Filter Chokes are available
- Typical AC Ripple with filtering is 5% or better from 20-100% kW
- Aldonex can offer filtering of <1% on SCR units upon request!
- External units are enclosed in a Poly-Pro enclosure. (Powder Coated Steel, and Stainless Steel is optional)



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What Is Ripple?

Ripple is a byproduct of converting AC Electricity to DC Electricity.

Ripple = (RMS of ripple voltage/average DC output voltage).

Ripple is an AC voltage superimposed on top of the DC output voltage.

Every type of rectifier circuit will have some amount of ripple present on the output. The amount of ripple varies with the type of rectifier circuit used and output voltage level. Most common single-phase SCR power supplies use “center tapped & “bridge output circuit”. These power supplies have a ripple of 48% at full rated voltage if no additional filtering is added to the circuit. We include filtering standard on all single phase SCR & VT power supplies.

Three Phase SCR power supplies use either a bridge or 6 Phase output circuit. A ripple of 4.2% can be expected at full rated voltage. SCR type power supplies will have a greater amount of ripple present when not operated at full output voltage. Additional filtering is required to maintain low ripple throughout the operating range (typically 20-100%kW on SCR rectifiers)

How Do You Measure Ripple?

Required equipment:

- True RMS reading multi meter.

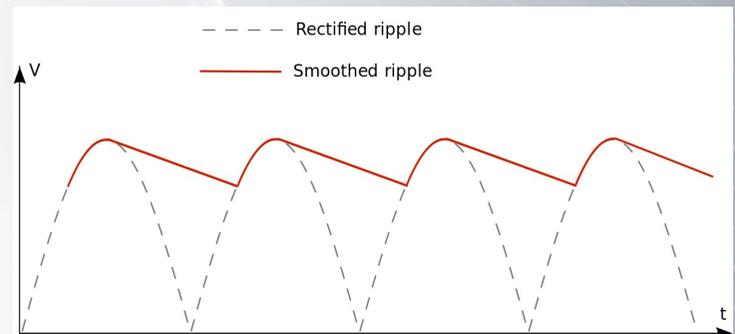
Steps:

- 1) Set rectifier to desired output voltage and current.
- 2) Measure and record RMS AC voltage on the output.
- 3) Measure and record the RMS DC voltage on the output.

Calculate % Ripple using the following formula:

$$\text{- \% Ripple} = (\text{RMS of ripple voltage/average DC output voltage}) * 100$$

$$\text{Example: } (1.5\text{VAC}/24\text{VDC}) * 100 = 6.25\%$$



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