

Importance of Matching Tapers When Replacing Electrodes

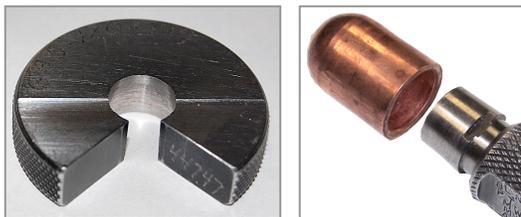
It is imperative that electrode adapters match cap tapers to ensure proper engagement. Using mismatched components can lead to a number of operating issues such as: water leakage, accelerated wear, caps falling off during use, and poor weld quality.

The following general guidelines should be followed to verify that your adapter and cap tapers match.

Measuring Electrode Tapers

The accepted taper standard followed by most electrode manufacturers is the **RWMA** (Resistance Welders Manufacturers Alliance) specification. This standard stipulates the taper angle and gauge point for adapters and caps in both male and female configurations.

To verify that your components adhere to the specification(s), CenterLine recommends using a **certified ring gauge*** to check adapter tapers and **certified taper plug gauge*** for caps.



Ring Gauge

Plug Gauge

These tools will enable you to check your caps and adapters for proper engagement and verify that the tapers have not been damaged as a result of wear, deformation from wrench marks, or as a result of using mismatched components.

Should you discover an incorrect or damaged taper, **replace the component immediately** to prevent further damage and to ensure that your equipment will operate properly once back in service.

Helpful Hints

Some helpful hints to consider when replacing/servicing your electrodes:

- As part of your incoming inspection procedure, **check all tapers** when receiving caps or adapters from a new supplier or whenever the taper or material specification has been changed. This will help you verify that your new components will properly engage with your existing ones and thus prevent production or quality issues from arising.
- Use a proper **cap extraction tool*** when manually replacing caps in order to avoid damaging adapter tapers.
- Never use a hammer or vice grips to loosen the cap from an adapter**, only use a rubber mallet.
- Refrain from “seating” the cap by striking it with a mallet. Your cap replacement process should include a low pressure closing sequence for seating the caps; this will prevent misalignment and taper deformation. If this is not practical with your equipment configuration then use a soft face dead blow hammer.

Proper taper – the adapter does not protrude past the gauge and is measured within the allowable engagement range



Incorrect taper – the adapter does not measure within the allowable engagement range

* CenterLine supplies taper and plug gauges and cap extraction tools. Contact us today to discuss your requirements.