Venture's Technical Information:
CAPACITORS

With lag and HX ballasts, capacitors are needed to improve (input) power factor. As a result, the number of lamps that can be operated on a circuit nearly doubles. In large installations, power factor correction is also required to avoid power quality problems and utility penalties. Capacitors are integral components of CWA and regulated lag circuits; they will not operate without capacitors. Both oil-filled (wet) and dry-film capacitor technologies are commonly used with ballasts. A means to discharge capacitors after power is turned off is a safety requirement.

Oil-filled capacitors

Oil-filled capacitors come in metal cases and are filled with a dielectric fluid. They are rated up to 100°C, although 90°C is the most common rating. They usually have two 1/4" spade terminal lugs located on the top for connection with the ballast. Most ballasts come with the mating terminals already attached to the appropriate leads. Oil-filled capacitors are very reliable and available in ratings up to 525V. For some higher wattage HID ballasts, they are the only choice.

Dry-Film capacitors

Dry-Film capacitors do not use a dielectric fluid. Originally, these capacitors were limited to applications where voltages did not exceed 330V. Recent advances have pushed this to 400V. They are available in temperature ratings of 100°C and have become an attractive alternative to oil-filled capacitors. They are packaged in plastic housings which do not need to be grounded and do not need any special clearances above the terminals.

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