



VLF E SERIES LOAD CHARTS: VLF-34E & VLF-65E

VOLTAGE vs. CAPACITANCE vs. FREQUENCY

Commonly asked question: Is the load capacitance testing capability of the VLF-34E or the VLF-65E constant from 0 – maximum output voltage? If the set is rated to test 0.5 μF of load at 34 kVac peak at 0.10 Hz., can it test higher capacitance loads, or longer cables, at lower voltages?

Yes, lowering the output voltage raises the capacitance testing capability of the set. At a lower than maximum output voltage, but the same frequency output, the E Series VLF hipots from HVI can test proportionately higher μF rated loads. The μF load testing capability is inversely proportional to the output voltage setting, the lower the voltage the higher the capacitance.

This is not true of the original patented VLF Series from HVI of oil immersed, transformer based electro-mechanical VLF designs. The load capacitance rating for these models is fixed regardless of the output voltage.

Explained another way, each E Series model has a **maximum output current** rating. To “pull” that same current from the VLF into a cable under test at 15 kVac would require a cable twice in length as that of a cable tested at 30 kVac. **Example:** A 2 km cable rated 0.5 μF tested at 20 kVac would require the same test current as a similar 1 km cable tested at 40 kVac. The load test ratings using the same VLF model could be written similar to this: **5 kVac @ 6.0 μF or 15 kVac @ 2 μF or 30 kVac @ 1 μF**, at the same frequency.

The two load charts below represent the E Series models load capabilities versus output voltage.

