

## cLEAN Cable Requirements

STOBER's cLEAN Motor relies on interior permanent magnet technology to outperform the induction/asynchronous motors typically used in conveying applications. The cable used with the cLEAN system must have certain characteristics to ensure the motor performs as expected. STOBER researched and tested the performance characteristics of several cables finally deciding on the cLEAN cable.



Not all VFD cables are the same, so it is pivotal to use the cLEAN cable to ensure seamless cLEAN system operations. If it is impossible to use the cLEAN cable, refer to the cable's characteristics outlined below. If a third-party cable does not

meet the same specification as the cLEAN cable, reach out to STOBER for evaluation to ensure optimal performance and longevity of the cLEAN System.

### REQUIRED:

- 4 x 14AWG rated to 1000 VAC
- 2 x 16AWG Twisted Shielded Jacketed Pair (TSJP)
- Shielding >80%
- Overall Diameter <13mm
- Temperature rating <90°C
- Dielectric Constant <3

### PREFERRED:

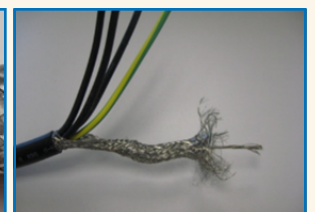
- RAL 2003
- Flexible
- Washdown rated
- ECOLAB rated and abides by UL and NFPA
- PP, TPE for core insulation
- PUR, TPE, PP for outer sheath



### TECHNICAL DETAILS:

The cable's outer and inner jackets must be flexible and provide electrical insulation for a rating of 1000 V minimum. The inner jacket can be a thermoplastic elastomer (TPE), polypropylene (PP), or polyurethane (PUR). PP has excellent electrical insulation and thermal properties. It is resilient to water trees which is electrical degradation in the presence of electrical stress and moisture. A polyurethane outer jacket is recommended. Not only does it have excellent electrical and thermal properties; it is abrasion resistant and limits the growth of bacteria in microbes which is vital in the food and beverage industries. Additionally, the cable must be UL and ECOLAB (certified to withstand Food and Beverage Industry cleaning agents) certified. The cable is encapsulated in a minimum of 80%

copper braid. This is necessary to reduce the electrical interference caused by the drive controlling the motor. The shield carries the interference to ground through the motor housing or the drive. Both ends of the shielding must be grounded. Additionally, the same shielding is used on two signal wires contained in the cable. This shielding is required for the same purpose as the outer shielding. However, this shield only needs to be terminated on the drive end.

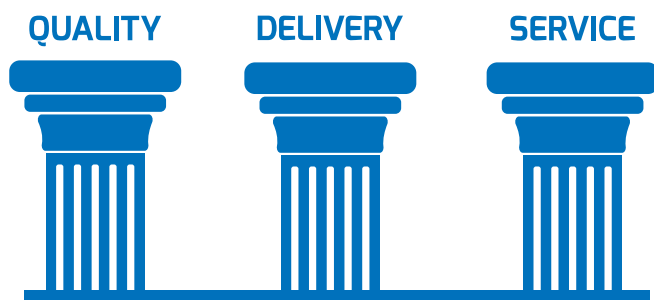




# STOBER

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