



## **DECOSTRING INSTALLATION GUIDE**

***Read and understand the following product and safety instructions to ensure a successful installation***

### **Product Description**

Decostrings are a fully assembled and built-to-length suspended festoon lighting system. They are specifically ETL listed as a 120v system for permanent wet installation and locally manufactured to meet the quality expectations of municipal, commercial and theme park applications.

### **Product Components / Features**

**Socket:** Medium base, black, weatherproof, non-metallic phenolic. O/C or custom spacing as specified.

**Power Cord:** 12/2 black UV rated duplex cord. 4' extra lead provided for make-up standard.

**Aircraft Cable:** 3/32" 7x7 Stainless Steel support cable 920# test / 175# working load. 4' extra tails each end for adjustment standard. Heavier cable available.

**Attachments:** Black UV rated zip ties @ ~12" o/c secure cord to cable.

**Lamps:** Wet Listed LED and Incandescent medium base lamps supplied. Silicone Coating option available for food service applications "SC". Use ELV dimmer to 10%

**Termination Hardware:** Stainless Steel Kits are available. "TK" for drooped suspensions or "TBK" for tensioned suspensions requiring turnbuckles.

**System Weight:** The most common bare lamp spacing is 24" o/c. Estimate the complete dead load weight at 5oz / ft or about 15# for a 50' run. For a 7" cone shade at 48" o/c the estimate only changes to about 7oz / ft. Larger shades and alternate spacing changes these values a bit. System maximum working load is 175# which includes lighting system and termination hardware kits.

**Listing/Labels:** Each run is ETL (C/US) wet labeled on the power cord and confirming file documentation is included with every shipment for inspector review.

**Maximum Run Lengths:** Each run is technically rated for a full 20A (1920w) 120v circuit however this is never reached now with LED lamps. Maximum length is really controlled by both practicality and voltage drop. Extend the number of sockets by the lamp wattage (typically 1-3.5w ea.) to determine connected load per run.

## **NEC / Local Code Awareness**

Be certain to consult local codes and the National Electrical Code for installation Details. Be specifically mindful of NEC 225-18 which dictates minimum suspended mounting heights. + 10' AFG for pedestrian applications and +18' AFG for vehicular applications.

## **Ordering Runs**

Decostrings are ordered "by the foot" as a straight-line measurement between two suspension points without the need to figure in additional length for droop. 4' tails each end standard. Single straight suspensions offer the most accuracy in adjustment especially if runs are to be centered or intersect. If there is to be a zig zag pattern, originating from a single feed point, it is wise to add up all of the leg lengths and add 1' per leg to allow for droop in each leg. Any extra length can be shortened up from the end of the run then the electrical cap resecured with a shot of silicone. It is not advisable to order a bulk length for field cutting for there will not be tails on each end and the individual cut lengths will not have ETL labeling. Maximum single run length is 500'.

## **Structural Attachment**

The attachment point on the building or pole is typically best served by a 1/4" eye for compatible fit with "TK" kit and the included 3/16" "quick link" that has a 5/16" gate. Special care must be taken when installing extremely long or tensioned runs due to the increased lateral loading. Again, be mindful of NEC height limits.

## **Installation Procedure**

- 1. Run Identification -** Each run is marked by run length and often with additional location identification as provided. Uncoil the run of lighting making certain that there are no twists in the cable set. Position the power lead on the same side as the j-box.
- 2. Support Cable -** Take rough measurements and loosely install the termination kit on each end of the aircraft cable. The suspension can then be installed and adjusted to the proper droop before fully securing the cable clamps. The quick links make for easy attachment and removal. The "TBK" turnbuckle kits are only used with tensioned suspensions.

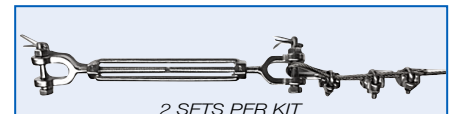
**STK – STANDARD TERMINATION KIT**



**LTK – LIGHTWEIGHT KIT**



**TBK – TURNBUCKLE KIT**



- 3. Power Make-up** - *Electrical connections must be made by a qualified electrician and according to NEC.* Preferred permanent connection of the power cord forms a drip loop and enters the bottom of a weatherproof "bell box" through a cord grip. Variations if this can include a cord grip entry at the top/side of a pole with the splice under the pole cap or a temporary attachment using an Edison plug protected under a clamshell. Interior (damp/dry) installations are a simpler termination.
- 4. Shades** - Optional shades are either shipped pre-installed on the sockets (DSH, DSRW,DSRG) or are attached next by means of sliding the socket through the top hole and stretching the retainer ring over the socket flange. The shade moves a bit by design but is very secure.
- 5. Lamps** - Complete the installation by lamping as you normally would. Fine tune the socket orientation confirming they are all pointing down. In windy installations, a small dot of clear silicone in the margin between the socket and screw shell can help lock the lamp in place and guard against it working loose.

#### **Power Notes:**

- **Dimming** - All cataloged lamps will dim to 10% when controlled by a trailing edge (ELV) dimmer.
- **GFCI** - Including a ground fault device is never a bad idea for exterior circuits, however at the NEC required mounting height of +10', Decostrings are above the 6' window and are technically not required. The fact that they are typically permanently wired, reinforces this. By design, GFCIs are extremely sensitive devices and we have had reports of nuisance false tripping on wet or very foggy nights. A harmless 2-ohm leak x 100 sockets suggests a disaster to a GFCI when all is perfectly safe. Be aware of this potential condition.

#### **Safety Warnings:**

- *Do not install this fixture in hazardous locations*
- *Do not install this fixture within 6" of any curtain or similar combustible materials*
- *Do not install over swimming pools or water features (check local code)*
- *Replace with same lamps – wattage / wet rating*
- *Do not exceed 1920 watts per run (120v /20A derated circuit)*

Please contact the factory with any questions: 626-442-4600