

COSTS AND SAFETY ADVANTAGES OF THE Dextrite Series "E" Fluorescent Lamp Disposers

Fluorescent tubes are the most common light source now in use in offices and plants throughout the developed world because of their high electricity to light conversion efficiency. While they come in many shapes, the 4 foot and 8 foot long tubes are the most common. Mercury is essential to the operation of the tubes. In the manufacturing process the required mercury is placed inside the tube. A four foot tube will contain 13 to 50 milligrams of mercury and an 8 foot tube will contain 20 to 75 milligrams of mercury. The average four foot tube will additionally contain 4 to 5 grams of a light emitting phosphor powder on the inside of the glass tube.

Mercury in many forms and compounds has been designated as a hazardous substance by the Environmental Protection Agency and others because of its adverse affects on biological systems.

Fluorescent tubes have a typical operational life span of 8,000 to 10,000 hours, roughly one year of continuous operation. At the end of their useful life they need to be disposed of in a safe manner. The disposal process presents many challenges, a most important one of which is not breaking the tube before mercury vapor control can be exercised over hazardous mercury within.

The handling of the tubes in the act of replacement, packing, shipping and unloading presents many opportunities for breakage and thereby uncontrolled release of mercury as liquid and vapor. The controlled crushing of fluorescent tubes as close as possible to the source of the tube exchange minimizes the chances for uncontrolled mercury release.

Additionally, the crushing of fluorescent tubes near the exchange site greatly reduces the volume of

material which needs to be shipped to the disposal or recycling site. This reduces packaging and shipping costs greatly and makes it practical to hermetically seal the crushing during shipment and eventual disposal when not recycled. The cost savings are significant and quickly justify the cost of the crushing machine which incorporated mercury vapor emission controls. Our studies have shown that the cost of crushing, including labor cost, machine amortization and drum cost is in the range of 16 to 26 cents per four foot fluorescent tube.

The Dextrite Series "E" Fluorescent lamp disposers provide the advantages discussed above by crushing tubes into a 55 gallon sealable steel drum, while maintaining negative pressure (vacuum) on the inside of the machine to minimize the escape of mercury vapors and dust. The vacuum is generated and maintained by an innovative patented fan, filter and poly-sleeve system which is active whenever the machine is running. The filter system incorporates an activated carbon stage which absorbs any mercury vapor in the exhaust stream rendering it safe. The Poly-Sleeve seals the drum to the machine, preventing escape of vapors and dust into the atmosphere during drum change.

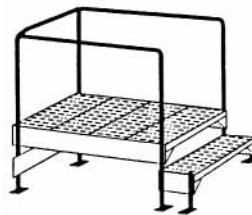
Dextrite lamp disposers, types RDA-55E, RHID-55E, RULC-55FDA-E, RLC-55FDA-E, ULC-55FDA-E, LC-55FDA-E and DC-30E have been thoroughly tested while in operation for mercury emissions at the various machine seams and at the exhaust stream. Results have shown emissions at any point to be well below the $0.05\text{mg}/\text{m}^3$ TLV (Threshold Limit Value), or maximum allowable atmospheric concentration of mercury for a normal eight-hour work day schedule recommended by the National Industrial Pollution Control Council.

CUSTOM WORK PLATFORMS Recommended for use with Dextrite Lamp Disposers

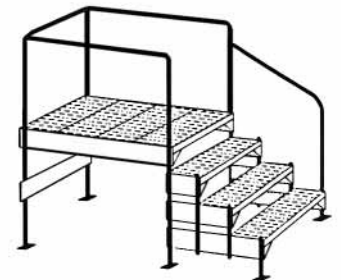
We advise caution especially when feeding 8 foot lamps into the drum top Disposers. It has been our experience, during emission testing procedures, the handling of these lamps can be hazardous. We recommend using a work platform when disposing of these lamps. Dextrite offers two work platform models CW2-21 and CW8-45.

FEATURES:

- 500 lbs capacity
- 4'X4' platform space
- Legs & handrails made of 1 1/4" steel tubing
- 39" high handrails above platform
- Grip Strut Tread on steps and platform
- Meets OSHA Standard 1920,239 (C)



The (CW2-21) one step model is recommended for use with the ULC-55FDA-E and LC-55FDA-E Disposers



The (CW8-45) three step model is recommended for use with the RDA-55E, RHID-55E, RULC-55FDA-E and RLC-55FDA-E Disposers