



## ELECTRO OVERHEAD MAGNETIC SEPARATOR FOR MATERIALS RECYCLING SPECIFICATIONS AND DATA

### DESCRIPTION

Specifically designed to remove loose steel objects from recyclable material conveyed beneath it, this version of our electro overhead suspended magnetic separator is typically installed crossways above a slow moving picking belt or vibrating conveyor. Its unique design is ideal for extracting and discharging the wide variety of ferrous materials found in recyclables.

The suspended overhead separator magnetically lifts steel objects out of the materials conveyed beneath it. Attracted steel is automatically cleaned off the separator by a belt that travels around it. This separator features special 3" high cleats bonded to the belt plus stainless steel infeed deflector which prevents materials from becoming entrapped between the separator belt and magnet surface. Although most applications require an electromagnetic model (powered by DC from a rectifier), a permanent (non-electric) model is also available.

### APPLICATIONS

Typical applications include removing ferrous materials from:

- commingled recyclables at materials recovery facilities (MRFs) to obtain separate material streams
- presorted recyclables at intermediate processing facilities (IPFs) to ensure high quality materials
- refuse at mixed waste processing facilities to recover recyclable ferrous materials
- organic materials at composting locations
- shredded tires at tire recycling processing sites

### TYPICAL INSTALLATIONS

- 1) For conveyor widths 18" to 72".
- 2) For suspension heights up to 22".
- 3) For conveyor speeds up to 100 fpm - crossbelt installation.

For higher conveyor speeds or suspension heights, consult factory representative.

### SPECIFICATIONS

- 1) Balanced magnetic circuit. See electro overhead product bulletin.
- 2) Coils are wound with Class H anodized aluminum strap - See Bulletin 21.
- 3) Non deteriorating glastic coil spacers.
- 4) **Ten** year warranty against magnet coil burnout (longest in the industry), one year on balance.
- 5) DC voltage is 115 or 230 depending on model.
- 6) Solid steel center core.
- 7) Magnet case filled with Fina Diekan-410 transformer oil.
- 8) Space inside magnet case for warm oil expansion. (Because of exclusive coil design using anodized aluminum strap, no external expansion tank is necessary).
- 9) One-way pressure relief valve.
- 10) Thick steel side plates in magnet case.
- 11) Stainless steel bottom plate.
- 12) Terminal connection box is NEMA 4 weather tight.
- 13) Oil level plug on side of magnet.
- 14) Oil drain plug on side of magnet.
- 15) Oil fill plug on top of magnet.
- 16) Weight and watts depend on magnet model.

- 17) Nonendless multi-ply rubber self-cleaning belt with 1" x 3" high vulcanized rubber cleats - standard for MRF and can recycling applications. 1" high cleats are standard for other applications.
- 18) Flexco brand stainless steel mechanical fasteners.
- 19) Stainless steel deflector mounted on infeed side of crossbelt separator (mountable on either side of frame).
- 20) Self-cleaning belt speed is 250 or 450 fpm.
- 21) Four pulley design (two pulley on Model 11).
- 22) TEFC 1800 RPM drive motor, 230/460-3-60 AC.
- 23) Shaft mounted gear motor.
- 24) Self-aligning pillow block bearings.
- 25) Adjustable screw take-ups on tail pulley.
- 26) Crown curved pulleys with compression style hubs.
- 27) Heavy duty steel channel frame with four welded suspension lugs.
- 28) All unprotected surfaces are spray painted with a coat of enamel.
- 29) Options:
  - a) Zero Speed Switch (NEMA 1, 4 & 12 or NEMA 9).
  - b) Special self-cleaning belts (high temperature anti-static or Severe-Duty Durabelt - see Bulletin 22, standard on Severe Duty model, see Bulletin I94-SDE).
- c) Variable AC control to adjust magnetic strength (often used in scrap tire processing).
- d) 3/16" thick stainless steel replaceable wearplate on impact area of magnet.
- e) Stainless steel angle bolt-on cleats.
- f) Nonstandard AC voltage and Hz for drive motor or enclosures other than TEFC.
- g) Motor starter - specify NEMA enclosure.
- h) Suspension components (turnbuckles, wire rope, shackles, sling assemblies)
- i) Central bearing lubrication system.
- j) Self-cleaning belt speeds other than 250 or 450 fpm.
- k) SP-6 blast cleaning and/or special paint.
- l) Chain and sprocket drive with oil tight chain guard.
- m) Endless (nonspliced) self-cleaning belt or hinge style splice with center pin.
- n) Expanded metal pulley guards.
- o) Belt alignment switches.
- p) Consult factory on any options not listed.
- 30) Rectifier - refer to Specifications and Data Bulletin 2530S.