



## SEVERE-DUTY ('CR' SERIES) ELECTRO OVERHEAD MAGNETIC SEPARATOR SPECIFICATIONS AND DATA

### DESCRIPTION

This rugged version of the Dings Electro Overhead magnet is designed for severe-duty applications such as recycling crushed concrete, pallets, and construction and demolition (C&D) debris. The heavy-duty model is also recommended for separating steel from organic waste at composting sites, and for retrieving castings out of foundry sand.

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 metal clad Durabelt that travels continuously around it. It also features a larger than standard drive package for the self-cleaning belt, lagging on the drive pulley, and a wearplate that provides extra protection for the magnet impact.

Suspended overhead magnets are available for either over-the-belt (crossbelt) installation or for over-the-headpulley (inline) installation; the preferred location for most applications is inline above the material trajectory as it is discharged from the conveyor belt. Separating efficiency is greater on an inline installation because the conveyed material is less compacted while being projected directly toward the magnetic surface of the separator.

Although most applications require an electromagnetic model (powered by DC from a rectifier), a permanent (non-electric) model is also available. (See Bulletin I94-SDP.)

### TYPICAL INSTALLATIONS

- 1) For conveyor widths 18" to 72".
- 2) For suspension heights up to 22".
- 3) For conveyor speeds up to 400 fpm - inline installation.
- 4) For conveyor speeds up to 300 fpm - crossbelt installation.
- 5) For higher conveyor speeds, consult factory representative.
- 6) For conveyor speeds below 200 fpm, headpulley may have to be nonmagnetic stainless steel to prevent loss of separation efficiency (for inline mounting only).

### 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) Special heavy duty multi-ply rubber self-cleaning is nonendless stainless steel clad Durabelt with replaceable 7 ga. (3/16") 304 SS pads and cleats - See Bulletin No. 22.
- 18) Flexco brand stainless steel mechanical fasteners.
- 19) 3M "Safety Walk" lagging on drive pulley for added belt traction.
- 20) Shaft mounted gear motor.
- 21) Heavy duty suspension lugs.
- 22) Four pulley design.
- 23) Self-aligning pillow block bearings.
- 24) Self-cleaning belt speed for inline and crossbelt models is 450 fpm.
- 25) Adjustable screw take-ups on tail pulley.
- 26) Crown curved pulleys with compression style hubs.
- 27) Heavy duty steel channel frame.
- 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) Nonstandard AC voltage and Hz for drive motor or enclosures other than TEFC.
- c) Motor starter - specify NEMA enclosure.
- d) Suspension components (turnbuckles, wire rope, shackles, sling assemblies)
- e) Central bearing lubrication system.
- f) Self-cleaning belt speeds other than 450 fpm.
- g) SP-6 blast cleaning and/or special paint.
- h) Stainless steel deflector mounted on infeed side of crossbelt separator (recommended for all applications with slow moving feed conveyors).
- i) Chain and sprocket drive with oil tight chain guard.
- j) Endless (nonspliced) self-cleaning belt or hinge style splice with center pin.
- k) Expanded metal pulley guards.
- l) Belt alignment switches.
- m) Consult factory on any options not listed.

30) Rectifier - refer to Specifications and Data Bulletin 2530S.