



PERMA PULLEY INSTRUCTIONS

DESCRIPTION

The Dings Perma Pulley is a permanent (nonelectric) magnetic separator. It's used on belt conveyors in place of a regular head pulley. It provides automatic and continuous separation of tramp iron on either troughed or flat bed conveyors.

Magnetism is produced around the outside of the pulley by an inside assembly of ceramic magnet material called Ceramox.

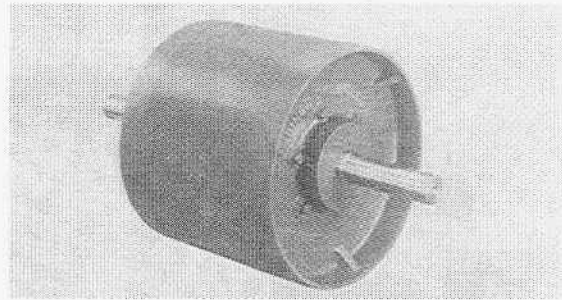
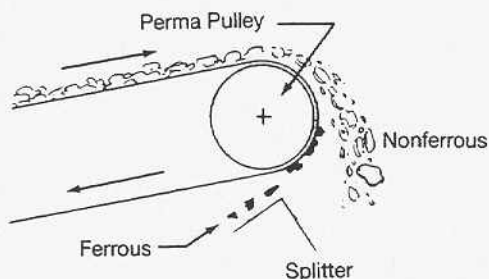
Perma Pulleys are furnished in many diameters and belt widths. Large diameters are magnetically more powerful than small diameters because they contain more Ceramox.

Face width of a Perma Pulley is normally 2" greater than belt width. The aluminum pulley heads are tapered and the stainless steel shell is flat. This combination provides a crowned surface for proper belt tracking.

OPERATION

Conveyed nonmagnetic materials such as coal, glass, aluminum, and sand are not affected by magnetism. Such materials follow a normal trajectory when they fall from a magnetic head pulley. Ferrous materials such as iron and steel objects are affected. When they enter the magnetic field, they are attracted downward towards the belt. Tramp iron is magnetically held against the belt as the belt travels around the pulley.

Tramp iron is discharged on the underside of a Perma Pulley where the belt loses contact with the pulley. In some applications a nonmagnetic metal divider is useful. Install it about halfway between the front face of the pulley and the vertical centerline, and about 3" or 4" below the pulley. A divider can provide a more positive split between the nonmagnetic discharge and the magnetic discharge.



INSTALLATION

A Perma Pulley is shipped complete from Dings ready to install as a unit, including shaft. Do not disassemble any parts.

Install support bearings on both ends of shaft. The magnetism will not alter performance of bearings.

Install conveyor belt around pulley. If the belt is spliced together, cover splice with tape or rubber to prevent small particles of ferrous material (fuzz iron) from seeping through the splice. An accumulation of fuzz iron on surface of magnetic pulley can cause wear on shell and belt.

If conveyor has a flat bed, use side boards to contain burden of conveyed material several inches in from sides of belt. This will prevent conveyed material from falling off edge of belt and directly against surface of pulley.

Install your conveyor drive. For best separation efficiency, keep speed of pulley under 40 RPM on diameters from 15" to 30". Speed of a 12" diameter should not exceed 50 RPM. Higher speeds will shorten the time that tramp iron will be in the magnetic field and consequently reduce efficiency. Some tramp iron may not be separated.

MAINTENANCE

- Keep support bearings greased to prevent wear on pulley shaft.
- Keep belt splices dust tight.
- Keep set screws in pulley heads locked tightly against shaft.
- Periodically brush off face of pulley. If metal objects and fuzz iron are allowed to accumulate on face of pulley (underneath belt), the belt and pulley shell will wear rapidly.
- Do not heat pulley to temperature above 400° F or cool it below -20° F.

If disassembly is required and the pulley cannot be returned to Dings, please contact the factory for complete instructions.