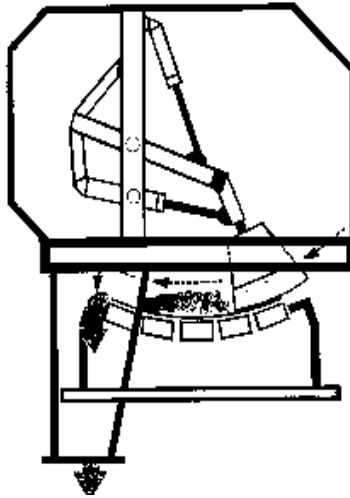


PRX TOP-BELT PNEUMATIC DRIVE SAMPLER FOR SAMPLING SMALL CONVEYORS

PRX Model Numbers

PRX-400 PRX-500 PRX-600 PRH-750

The number following the PRX sampler model designation indicates cutter radius (mm).



The PRX Top-Belt rotary cutter sampler is designed to extract representative samples directly from solid materials carried on a moving conveyor belt. Extraction takes place by driving the PRX cutter through a circular path above the belt with radius of the path matched to arc radius of specially constructed supporting belt idlers installed on each side of the cutter. The supporting idlers establish a fixed belt contour at the sampling position.

The PRX cutter travels a linear path across the belt driven by a pneumatically operating linear cylinder (hydraulic drive optional). Material extracted by the cutter is discharged beyond the conveyor belt edge into a collection chute provided to direct sample into a collection container or to the next stage of processing. Skirts installed on the conveyor belt on either side of the cutter path minimize scattered solids from entering the sample.

The PRX sample cutter high speed travel through material carried on the conveyor enables efficient sampling of moist materials having tendency for adhering surfaces. Discharge from the cutter is enhanced by momentum and brake action at completion of the sampling cycle. Advantages of the PRX mechanisms also includes simplified installation requirements and relative lower quantity of sample volume per extraction by comparison to conveyor discharge trajectory sampling.

The pneumatic drive cylinder is connected to the cutter shaft through mounting brackets and pivots to lift the cutter back to sampling initiation position after completing a sampling cycle. Adjustment of cutter radius length to the belt arc and cutter angle to traversing path in moving through material burden on the belt is made at a shaft holding block. The cutter is provided with adjustable plastic plate of durable quality (polyurethane or equivalent) to safely minimize clearance between the cutter radial arc path and the belt surface while avoiding contact with the belt. Cutter volume is approximately equal to the cumulative sample volume.

Cutter opening is recommended as equal to a multiple of three times nominal particle top size, and cutter volume double sample extraction quantity. A scraper-brush device is provided to recover any remaining and residual fines left on the belt surface into the sample.

Timing and control functions are carried out with the use of a PA-500 timer control unit provided by HRCS. Alternatively, the PRX sampler can operated from a centralized programmed logic control system.

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