



Sampler/Splitter with Support Table



Note: Stationary baffle in feed funnel

Applications

Quinn offers a highly efficient slurry or minus 10-mesh dry solids splitter for pilot plant and small commercial operations. The unit is ideal for continuously splitting slurry or minus 10-mesh dry solids flows into from two to 12 equal streams. To this date, this capability has posed a serious complex problem where such small flow rates or quantities are involved. Typical mineral/chemical applications include:

1. Splitting slurry feeds to multiple flotation circuits for gathering comparative data.
2. Splitting slurry feeds to multiple leach circuits for gathering comparative data.
3. Splitting slurry feeds to compare two or more gravity, magnetic, or other type concentrators.
4. Sampling slurry or dry solids feeds to take a fixed percentage sample.
5. Splitting grinding mill feeds for either capacity requirements or to compare various mill designs; grinding charges, i.e., materials configurations, rod versus ball, etc., liner configurations or materials for capacity or wear capabilities.
6. Splitting out a representative portion of a slurry or dry solids feed stream for subsequent batch or continuous investigation.
7. Splitting out a representative portion of a feed stream for analytical determinations.
8. Splitting "batch" charges of slurry or dry solids into two or more equal portions for subsequent comparative investigations. Material may be pumped, dipped, or poured into the splitter. Ideal for splitting assay samples.
9. Splitting reagent feed systems in commercial size plants. Dilution water can be added to the feed cone along with the reagent.
10. The unit described in this brochure is designed to handle feed rates of 0 to ± 5 GPM of slurries of ± 0 to 11 pounds per minute of minus 10-mesh dry solids, s.g. 2.7. Larger sizes available on inquiry.

Advantages

The Quinn continuous batch or pilot plant splitter is designed to handle slurries or minus 10-mesh dry solids. Wetted parts are of stainless steel and polyurethane to prevent rust contamination. Slopes are steep and there are no flat spots. 100% of the feed stream flows into a feed cylinder revolving with a single discharge outlet. The outlet discharges continuously into 12 equally spaced splitter compartments passing all 12 compartments approximately once per second. The single outlet design and the rapid frequency of the splitter interval make for ideal splitter conditions and preclude inaccuracies which would be present with non-homogenous feeds handled in a different manner. The rapid frequency eliminates surging in the production of splitter products.

There are 12 splitter outlets - one for each compartment. For even further assurance of accuracy, two or more outlets at 180° can be discharged to form one splitter product depending upon how many splits are desired. Splitter compartments have "knife edge" cutters which are positioned radial to the center of the rotating distributor or, in other words, the cutter blades cut the feed stream at right angles to the stream.

For continuous feed operation, the outlet discharge is designed with a restriction clamp to maintain a minimal slurry or solids level in the cylinder. In our opinion, for reasons stated previously, this is not a necessary control; however, it is there if the operator prefers its usage.

Headroom requirement is minimum. The standard unit comes mounted on a pedestal for mounting on customer's table to permit the user's placing of splitter product receptacles under the compartments. The unit is also available mounted on a portable stand with room for customer's splitter product receptacles and/or a peristaltic or similar pump on the underside shelf.

The unit can be fed continuously from either hand-dumped buckets or a peristaltic or similar pump-out of a floor-mounted drum. The pump can be furnished by Quinn.

Specifications

Size 1 available as standard and is shown on above drawing. Larger units are on this application. Estimated feed capacity 5 GPM slurry, 10 pounds per minute dry solids, s.g. 2.7.

Rotating stainless steel feed cone and cylinder with Tygon discharge hose and restriction clamp.

Rotation shaft: Mild steel as not in contact with feed material.

Splitter compartments: 12 compartments are standard. Splitter compartments and splitter supporting disc is polyurethane as are splitter blades and confining ring. Discharge outlets are Tygon tubing.

Gearmotor drive: Totally enclosed for 1 pH, 60 Hertz, 110/220 volt operation.

Support pedestal: Standard for bolting to customer's table.

Option: Portable stand with underneath shelf for splitter receptacles and/or peristaltic pump which is also available as an option.

(Dimensions on next sheet.)

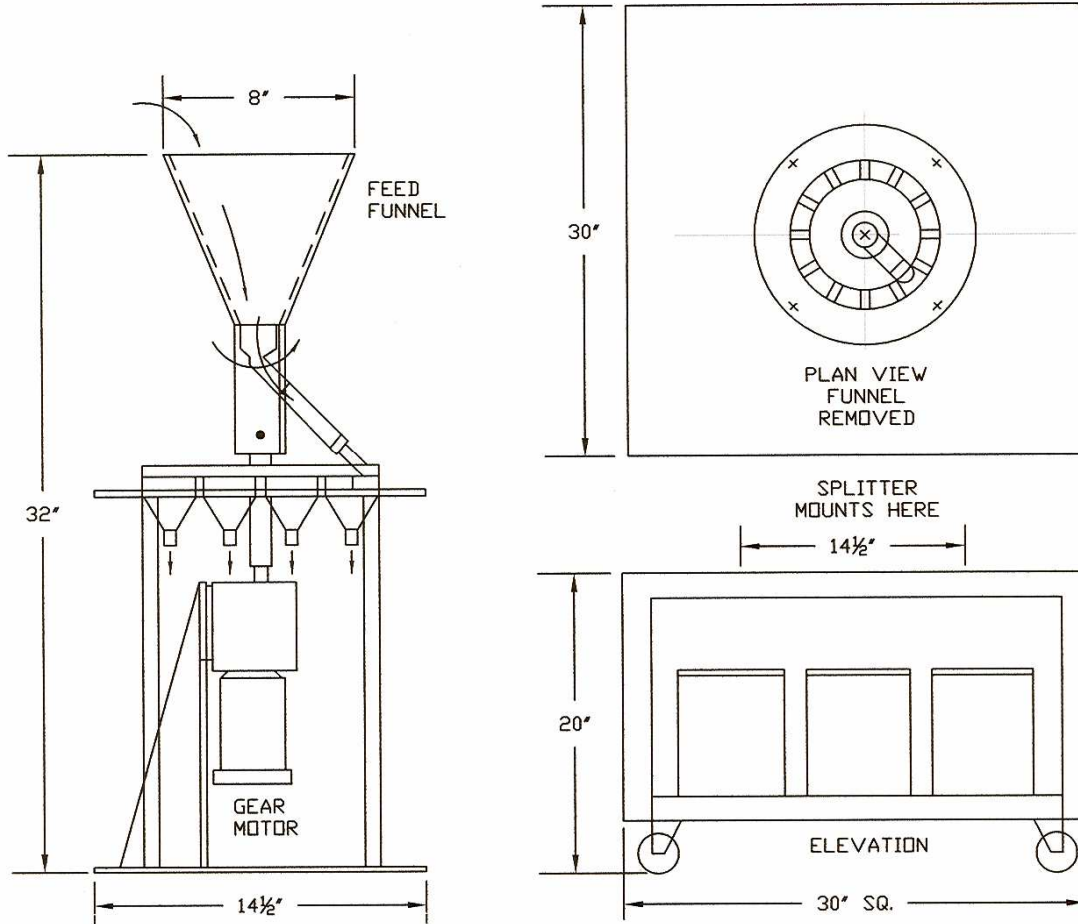


Table or Bench Model Sample Splitter

Optional Portable Laboratory Table Shown With Optional Pumps and Sample Pails