GROUNDHOG MECHANICAL SEPARATORS

The model 600 and 1200 mechanical Separators are manufactured by Pollution Control (UK) Ltd. they employ the National Institute of Agricultural Engineering design of the roller press principle to remove solids from effluents and slurry. This allows the separated liquid and solids fractions to be better stored, distributed or re-cycled.

A typical application for the Separator would be to take out the solids from Livestock farm slurry (including slurry with sand and sawdust bedding), Vegetable processing, Slaughterhouse wastes (including screening Paunch and Livestock wagon wash down), Livestock markets and Livestock Transfer stations, AD Digestate etc. where a higher dry matter solids content is required.

A simple two stage process, the slurry flows over sequential perforated stainless steel screens. The majority of the liquid is removed via the perforations in the first stage. The remaining slurry is then brushed into the second stage where it is compressed by tensioned rubber rollers to extract further liquid. The fibrous solids are then brushed over the screen to the outlet chute for subsequent storage. A solids fraction (dry matter content) of the slurry in the region of 18-23% can be expected depending upon consistency and homogenisation of the raw slurry. The 'Super Dry' Separator has additional sets of compression rollers to achieve a solids fraction of 26-30%.

The solids are stackable making them an easily managed product. Depending upon their composition there may be a market value as humus mulch for Horticulturists and Garden centres. The liquid fraction has a good nutrient value and can be spread onto farm land or further processed to reduce the COD/BOD, Suspended Solids and ammonia levels.

Outputs vary with the type of slurry being separated and the consistency in which it is presented to the Separator. A typical livestock farm slurry throughput would normally be in the region of 20-26m³ per hour for the 600 model and 46-54m³ for the 1200 model. In other applications where the slurry is more dilute a throughput of 48m³ per hour for the 600 model and 96m³ per hour for the 1200 model can be achieved.

A reception tank fitted out with a submersible or long shaft pump and a mixer are recommended to supply the raw slurry to the Separator. A constant flow of material is presented to the screens by virtue of a flow control weir at the inlet. To provide sufficient headroom for solids collection and liquid storage it is recommended to install the Separator in an elevated position. A galvanised platform and support legs is available for this purpose if required. For effluents where there is a risk of coagulation, e.g. oils and fats, spray nozzles are available to clean screens and brushes.

All vulnerable steel parts are either hot dip galvanised or stainless steel to protect against corrosion. Powered by very small electric geared motors (0.55Kw – 1.25Kw) and with brushes and rollers revolving at only 6-8rpm, maintenance costs are negligible.

POLLUTION CONTROL (UK) LTD, UNIT 2 HECLA WORKS, BROWN STREET, BAMBER BRIDGE, PRESTON, LANCS PR5 6LW
Telephone: 01772 620066 Fax: 01772 628996
Email: info@pollution-control.co.uk Web: www.pollution-control.co.uk
Manufactured & Designed by Pollution Control (UK) Ltd