



## GROUNDHOG MECHANICAL SEPARATOR

# Frequently Asked Questions for livestock installations

### **Q. What is the throughput capacity of the Separator.**

Throughput depends on age, dry matter content and viscosity of the raw slurry, but typically in livestock applications:

#### **MODEL 600**

On typical Diluted Cattle Slurry (6%-8% DM)	26m <sup>3</sup> /hr (5700 gallon/hr)
On pig slurry (5%-7% DM)	20m <sup>3</sup> /hr (4400 gallon/hr)
Solids capacity	1.5m <sup>3</sup> /hr

#### **MODEL 1200**

On typical Diluted Cattle Slurry (6%-8% DM)	54m <sup>3</sup> /hr (11400 gallon/hr)
On pig slurry (5%-7% DM)	40 m <sup>3</sup> /hr (8800 gallon/hr)
Solids capacity	3.0m <sup>3</sup> /hr

### **Q. Do we need to pre-mix**

Mixing/homogenising the slurry prior to separation is recommended. This is usually done in the reception pit by mechanical mixing using a pit mixer or long shaft mixer pump.

### **Q. Do we need to dilute the slurry**

To achieve efficient separation and good dry solids cattle slurry is best processed at approximately 6%-8% DM. Undiluted cattle slurry is approximately 13% DM, but this may vary with weather and feeding regimes. Separated liquid and/or parlour washings are usually used to achieve this.

### **Q. What about straw and sawdust bedding**

Straw bedding is better chopped prior to use, it is usually cheaper than to try and chop it in the slurry, less straw will be required, stock will be cleaner and slats and pumps will not block. Sawdust that contains sanding dust as sand can cause sediment build up in the liquid store.

### **Q. Does the Separator cope with sand bedding**

The Groundhog Separator is a very cost efficient solution as it handles sand laden slurry very well. We continue to replace competitor Separators which have become too costly to repair or maintain in sand applications.

### **Q. If solids are stored outside, will they turn back to slurry**

No, as the solids are bedding and waste fibre from the animals stomach.

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**Q. What about pre-screening**

We recommend the use of slats or grids to keep out large debris. The maximum aperture width should be approximately 60mm.

**Q. I want a very dry solids content**

The Groundhog 'Super-Dry' Separator provides a 'double' pressing action in the second stage to ensure that the maximum amount of liquid is extracted.

**Q. How dry are the solids**

Separated fibre in standard version                      18-23% DM

Separated fibre in 'Super-Dry' version                      26-30% DM

Pig slurry can be drier than cow slurry. Solids stack well and compost readily.

**Q. Is the fertiliser in the liquid or the solid**

After efficient separation of the solids the liquid fraction is essentially a NK fertiliser with a high proportion of NH4-N. The solids fraction is a NPK fertiliser with a high proportion of organic N.

**Q. Where do I install the Separator**

The Separator should be installed where practical adjacent to the reception pit.

**Q. At what height should I install the Separator**

Pollution Control's standard gantry and safety platforms are supplied upto 6 metres high, if the Separator is to be installed next to an above ground store then it needs to be high enough to discharge into the store. If the liquid store is at or below ground level then the height needed to allow the solids pile up before having to move it.

**Q. Do separated liquids smell**

The smell is reduced from the raw slurry but as the liquid enters the ground more readily than mixed slurry, the smell is much reduced in the field. As the solids are removed and it is the rotting of the solid that causes smell, then over long storage periods separated liquid could be said to reduce smell to about half.

**Q. Do liquids need agitation in the store**

No, apart from a little sediment, there is no fibre to form crusts and the sediment can easily be removed if the store is fully emptied each year.

**Q. Can the system be automated**

Yes, a fully integrated control panel can be supplied with auto control for Separator, Pit Mixer and feed pump c/w float switches and 24 hour timer.

**Q. How long has the machine been in existence**

The design is based on the well proven National Institute of Agriculture Engineering roller press principle. We have been manufacturing them since 1976 and we continue to find new applications for it.



**Q. How long will the separator last me**

With simple routine maintenance, a life expectancy of over 25 years is not uncommon.

**Q. What happens in frosty weather**

If the integrated control panel is used, an overrun facility to clean the screens is used. All connection pipes need to be installed to free drain. In excessive exposed installations some additional protection may be sensible.

**Q. What size/type of pumps do we use**

In order to avoid blockages with cattle slurry, a 100mm pump is recommended with approximate 5.5Kw or 7.5Kw rating. With pig slurry this can be reduced to 75mm with an approximate rating of 4.0Kw. These guidelines may vary dependant on head etc. Both submersible and long shaft pumps are suitable for most applications and choice usually comes down to personal preferences.

**Q. Why a Groundhog Separator**

Pollution Control have been manufacturers of slurry separators and handling equipment for over 35 years, originally for Farrow / Wright Rain and the BKW brand.

The Groundhog Separator is a well proven robust machine that has also been adapted by us for other industrial applications. The lifetime cost is appreciably lower than our competitors due to the simplicity of the design. All wearing parts are readily available on 24 hour delivery.