



# PRESS SEPARATOR



[www.effluentseparation.co.nz](http://www.effluentseparation.co.nz)

# WSP Press Separator

The WSP "01" series is the latest generation of solids separators for the New Zealand market. They have been designed and developed for local farming conditions and practices.

Manufactured from stainless steel they offer unparalleled reliability and years of consistent service.

Parts and service backup is available from a local company.

The WSP Press Separator has brought to effluent separation a practical, high quality, cost effective and environmentally friendly solution for New Zealand dairy farms.

- High quality, manufactured in New Zealand
- 0.5mm 304SS Wedgewire screen (other options available)
- Full 304 S/S construction
- Easily "retro-fitted" to existing systems
- Low maintenance due to few moving parts
- Low energy consumption for operation
- Hair tolerant
- Six models to meet your specific requirements

## Product Specifications

### WSP2501

- 80mm flanged connections
- Up to 20m<sup>3</sup>/hr flow dependent on solid content percentage
- 1.5kw motor

### WSP4001

- 100mm flanged connections
- Up to 30m<sup>3</sup>/hr flow dependent on solid content percentage
- 3.0kw motor


### WSP7001

- 100mm flanged connections
- Up to 50m<sup>3</sup>/hr flow dependent on solid content percentage
- 5.5kw motor




# The Effluent Separation System


**1** STONE TRAP

A photograph showing a stone trap installed in a concrete-lined water channel. The water is dark and still, and the trap is a long, narrow structure with a sloped bottom.

**2** PUMP CHAMBER, PUMP AND STIRRER

A photograph of a circular pump chamber containing a pump and a stirrer. The chamber is filled with water and has a concrete floor.


**4** SOLIDS BUNKER

A photograph of a large pile of brown, fibrous solids in a bunker. A small vehicle is visible at the top of the pile.


**3** WSP PRESS SEPARATOR

A photograph of a WSP Press Separator machine, which is a large, cylindrical metal device used for separating solids from effluent.

**5** HOLDING POND AND PUMPING SYSTEM

A photograph of a holding pond with a pumping system. The pond is surrounded by green fields and has a concrete structure in the water.

**5a** SOLIDS DISPERSAL

A photograph of a green tractor with a solids dispersal system. The tractor is pulling a trailer and is spreading a large amount of brown solids onto a green field.

**6** CENTRE PIVOT

A photograph of a centre pivot irrigation system. The system consists of a central pivot point and a long arm with multiple wheels, which is used to rotate the system around the pivot point.

**6a** IRRIPOD SYSTEM

A photograph of an irripod system. The system consists of a large, purple, dome-shaped pod that is used to collect and store effluent.

# The Separation Process

## 1 Stone Trap

A stone trap is required to remove stones and grit that settle before effluent enters the primary sump.

## 2 Pumping Chamber

The primary sump is used to handle shock loadings of effluent from the feed pad or dairy shed yard. The sump is also used for handling any surplus effluent from the separator – ie overflow from the separator returns back to the primary sump. The primary pump is quite small, as the effluent is only being pumped from the sump to the separator, meaning the electrical operating costs of the separation system are very low. The primary sump also requires a suitable stirrer to ensure a consistent solids content is sent through the separator.

## 3 WSP Press Separator System

The WSP Press "01" Series Separator is the latest generation of dairy effluent solids and fluid separation. The WSP Press Separator offers low maintenance with its simple and robust design. Effluent liquid is screened to 0.5mm and can be irrigated out of small diameter sprinkler nozzles allowing for low application rates through new or existing systems.

## 4 Solids Bunker

This bunker is used to hold moist solids until dispersal.

## 5 Holding Pond and Pumping System

Effluent (liquid) that is filtered through the WSP Press Separator gravity flows into the holding pond. The holding pond is used to settle any fine solids that pass through the separator. It is also used as the main storage system to ensure effluent can be held in times when soils are waterlogged or irrigation is not set up. The main pump system draws dirty water from the holding pond to irrigate.

### 5a Solids Dispersal

The solids are low in nutrients and are generally spread somewhere on the farm away from the normal effluent dispersal field.

### 6 & 6a Irrigation System

The dispersal system can either be operated through your existing system offering reduced application rates (by using smaller nozzles), or through a new system like pod irrigation, a pivot, hard hose or boom system. Because the solids are removed the dirty water is also suitable for injection into existing clean water irrigation systems.



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