

Effluent and Environmental | **Separators** ▶▶





SEPARATORS

◀◀ VIBRA SCREEN

ADVANTAGES

- Large processing capacity and optimal solids separation.
- Produces a very dry & odourless product which stores well.
- Automated cleaning cycle.
- Large capacity 12-60m³/h.



The Vibra Screen is a pre-treatment system for dairy shed effluent that separates the solids from effluent and wash down water, down to 1mm compressible solid. This is done by utilising a stainless steel vibrating screen, a method proven reliable in many other industries for decades.

The system processes dairy shed wash-down water at a rate of up to 54 cubic metres per hour, significantly more than many other systems. Its solid robust construction combined with minimal moving parts provides a simple and reliable effluent system with low

running costs. The Vibra Screen can be retrofitted to suit existing on farm infrastructure helping reduce initial capital costs.

- Capable of processing large volumes of raw effluent
- Low maintenance
- Minimal moving parts
- Separates solids to <1mm
- Recycle water for wash down
- Centre pivot injection compatible
- Cost efficient

Technical Specifications

VIBRA SCREEN SEPARATOR - SPECIFICATIONS				
	MOTOR (kilowatts)	DIMENSIONS (millimetres)	SHED WASHDOWN (cubic metres per hour)	FEEDPAD WASHDOWN Dependent on solids content
Small Screen	2 x 0.35 kW	750 x 2220	21.6 – 28.8 m ³ /hr	14.4 m ³ /hr
Large Screen	1.96 kW	1330 x 2060	32.4 – 54 m ³ /hr	21.6 m ³ /hr



Platform

The screen unit can be supplied with a galvanised walkway platform. The unit has channeled feet that are designed for ease of transport; these enable the use of a forklift or loader for lifting. These channeled feet are used to fasten and lock the unit to the platform. The platform is bolted to the concrete bunker wall.

ENVIRONMENTAL FEATURES:

- Separated solids can be spread on non-irrigated areas therefore extending the effluent block and reducing Nitrogen and Potassium loadings on soils.
- Solids can be easily stored for application when weather conditions allow and are easily transported for application to run off blocks.
- Excellent returns from crops can be achieved with lower fertiliser costs by applying solids to crop paddocks.





SEPARATORS

◀◀ SLOPE SCREEN

ADVANTAGES

- High quality 304 grade stainless construction.
- 0.8mm wedge wire screen.
- Screen curved for optimal angle for efficient share action to separate solids.
- High flow rate of up to 100m³ per hour.



Industry best practice is to separate solids before lined storage as a build up of solids can be problematic to remove. The Slope Screen Separator has been specially constructed for New Zealand's harsh environment – designed perfectly to suit all dairy farm requirements.

Why install a solids separation system?

A solids separator minimises the need for agitation in ponds and reduces the likelihood of blockages in pumps and pipes. Together with the reduction in volatile solids loading to the pond this allows smaller

ponds to be built or extends the cleaning interval of existing ponds. They allow the use of conventional irrigation equipment for distribution of effluent from adequately sized ponds. They concentrate organic matter for direct application to pasture, composting or cost effective transportation off-site.

Technical Specifications

SLOPE SCREEN SEPARATOR - SIZES

	SCREEN WIDTH (millimetres)	MAX FLOW (cubic metres per hour)
for 200 - 700 cows	1200mm	22 - 85m ³ /hr
for 800 - 1300 cows	1800mm	44 - 100m ³ /hr



Platform

A mounting platform can be supplied with the screen for fast and easy mounting. The unit has channelled feet that are designed for ease of transport; these enable the use of a forklift or loader for lifting. These channelled feet are used to fasten and lock the unit to the platform. The platform is bolted to the concrete bunker wall.

Self Cleaning

The screen is equipped with a self cleaning mode. This is initiated when the sump pump supplying the screen from the holding pond turns off; after a short delay the wash system starts and washes the screen for 3 minutes. By washing the

screen straight after the flow of effluent has ceased, enables the efficiency of the screen surface to stay optimal at all times.

ENVIRONMENTAL FEATURES:

- Separated solids can be spread on non-irrigated areas therefore extending the effluent block and reducing Nitrogen and Potassium loadings on soils.
- Solids can be easily stored for application when weather conditions allow.
- Excellent returns from crops can be achieved with lower fertiliser costs by applying solids to crop paddocks.
- Solids are easily transported for application to run off blocks.



SEPARATORS

◀◀ ROLLER PRESS

ADVANTAGES

- Low maintenance with minimal moving parts.
- Separates solids to <1mm.
- Recycle water for wash down.
- Centre pivot injection compatible.



Separating solids from effluent reduces sludge build-up in storage ponds and the chance of blockages in irrigation equipment generating liquid nutrients which can be applied to pasture.

The Roller Press Separator utilises a rotating drum and roller slurry compression system to separate large volumes of solid and liquid wastes, producing a very dry product. It is an ideal choice where sand and/or long fibres contaminate the dairy slurry and will not have the high wear issues commonly associated with screw separators. The Roller Press Separator requires low power.

Designed for reliability, durability and minimal maintenance, the separator will give you large processing capacity with optimal solids separation.

If you want a proven quality separator then it is hard to go past a roller press separator.

Technical Specifications

ROLLER PRESS SEPARATOR
Range of drum screen sizes from 1.3 - 3.0mm
AISI 304 Stainless Steel construction throughout
Automated cleaning cycle at the end of the processing cycle
Low power requirements - 1.5HP

Dryness of the separated solids typically varies between 60% and 70% moisture content, depending on the amount of pressure applied to the rollers. It is dry to touch and stores well, without smell.

WASTE TYPE	LITRES/MIN	LITRES/HOUR
Liquid Waste	1,000	60,000
Medium density waste	700	42,000
Very thick waste	400	24,000

Key to optimal performance

Roller press separator is completely made of AISI 304 stainless steel provided with rolls with a special gumming on stainless shafts rotating on SKF oil bath bearings. Loading tank is provided with a screen (stone-trap) and an automatic device for overflow discharge, with a hydraulic system for hydraulic check of roll compression complete with equalizer.



Additional options

- Control board.
- Separator mounting platform.
- Effluent transfer system.

As a leading global agricultural brand, DODA (made in Italy) are world renown for their superior design and robust construction, providing excellent reliability and very efficient performance, making DODA the obvious choice for

New Zealand's demanding effluent conditions.

ENVIRONMENTAL FEATURES:

- Odourless product which stores well.
- Low water usage.
- Low power usage.
- Dry solid product easy to spread to land.

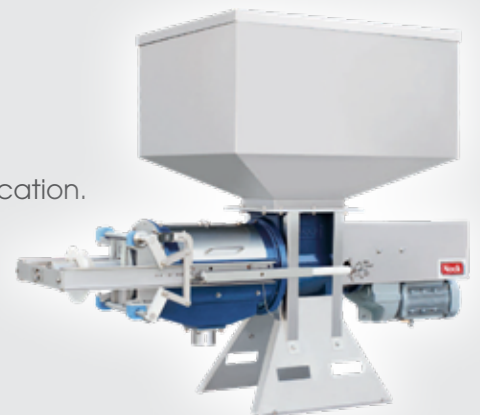


SEPARATORS

◀◀ SCREW PRESS

ADVANTAGES

- Continuous, automated, high throughput.
- Reduced waste volume means easy transport, storage and application.
- Simple to use, low maintenance.
- Two models available to suit processing requirements.
- Various screen sizes available to meet required solid content.



The Screw Press Separator combines precision German engineering, with ease of use and minimum maintenance in one of the most efficient and effective effluent separators on the market.

Easily retrofitted into your existing effluent system, the Screw Press Separator reduces the volume of slurry by effectively separating water from solids giving you two forms of fertiliser (water and dry solids) to apply to your pasture.

Designed for ease of use and reliability, the inlet tank continually feeds raw effluent through the press screw

separating water from solids, delivering a dry product which is relatively odourless.

Screen plugging is prevented by a unique auger and the pressure system is easy to adjust with ease of access for viewing and cleaning of the screen.

Technical Specifications

TYPE	MOTOR PERFORMANCE (kW)	ELECTRICAL CONNECTION	AVAILABLE SLOT WIDTHS OF SCREEN (mm)	THROUGHPUT MAX (m ³ /h)	OVERALL DIMENSION D x W x H (mm)	WEIGHT (kg)
NOCK SEPARATOR SP 254/3	3.0	3 AC 400V	0.25 0.50	3 - 20 *	2400 x 750 x 920	440
NOCK SEPARATOR SP 254/1	5.5	50 Hz	0.75 1.00	3 - 25 *	Without supply pipe or hopper	480

* The throughput strongly depends on the dry content and consistency of the fluid which is to be separated as well as the applied screen slot width.

The function principle of the Separator

The industrial de-watering press separates solids from water. It operates continuously and automatically according to the press screw separator principle and separates thin and viscous compounds.

Particularly suitable for this process are pumpable compounds with fibres or grains, which can be retained well by the screen cylinder. Emulsified or dissolved solids cannot be separated with this system.

Key to optimal performance

The Screw Press Separator provides efficient separating performance with a high throughput and a continuous separation process. This provides a reduction of waste, transport costs, dump volume and storage of the dry solids.

Additional options

- Control board.
- Separator mounting platform.
- Transfer system.



ENVIRONMENTAL FEATURES:

- Reduced environmental impact.
- De-waters and compacts solids reducing waste volume.
- Energy efficient geared motor with integrated motor protection switch.



How do you choose what is the right separation method for your farm?

Key things to consider are:

1. Volume that the separation method will need to handle per hour.
2. Size of the solids that you wish to remove.
3. The amount of moisture that you need taken out.
4. Availability of power.

Farm Dairy Effluent - **Design Accredited**

Working with regional councils around the country, we design, manufacture and install dairy effluent systems which meet the requirements of the relevant council, making it easy for farmers to be compliant today and into the future.



The programme goal is to ensure all NZ dairy farmers have effluent systems that can achieve dairy industry and wider communities' expectations for the land application of dairy effluent.

Farm Dairy Effluent - **WOF Certified Assessor**

The Effluent WOF programme consists of a voluntary, independent inspection of a farmer's effluent infrastructure and practices to ensure the system is compliant 365 days a year.



A 3-4 hour assessment covers the farm's effluent consents and permitted rules, the storage capacity, nutrient loadings, soil risk, irrigator performance, off-pasture infrastructure and general health and safety requirements.

All inspections are completed by people who are fully certified as Warrant of Fitness Assessors. Every assessor has completed the Farm Dairy Effluent System Warrant of Fitness Course and a subsequent field assessment.





BORN IN
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DEVELOPED FOR
THE WORLD



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