STORTH

EXPERTS IN SLURRY MANAGEMENT

MIX IT

Storth have worked hard with the end user to develop a wide range of Slurry Mixers to aid Slurry Management on every farm allowing us to provide the right mixing solution for your farm.

Slurry Mixing Solutions

Specialist Manufacturers of Slurry Handling Equipment

STORTH
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Holme, Nr Carnforth, Lancashire, LA6 1HR.

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Email: sales@storthmachinery.co.uk

Manufactured in the UK

www.storthmachinery.co.uk

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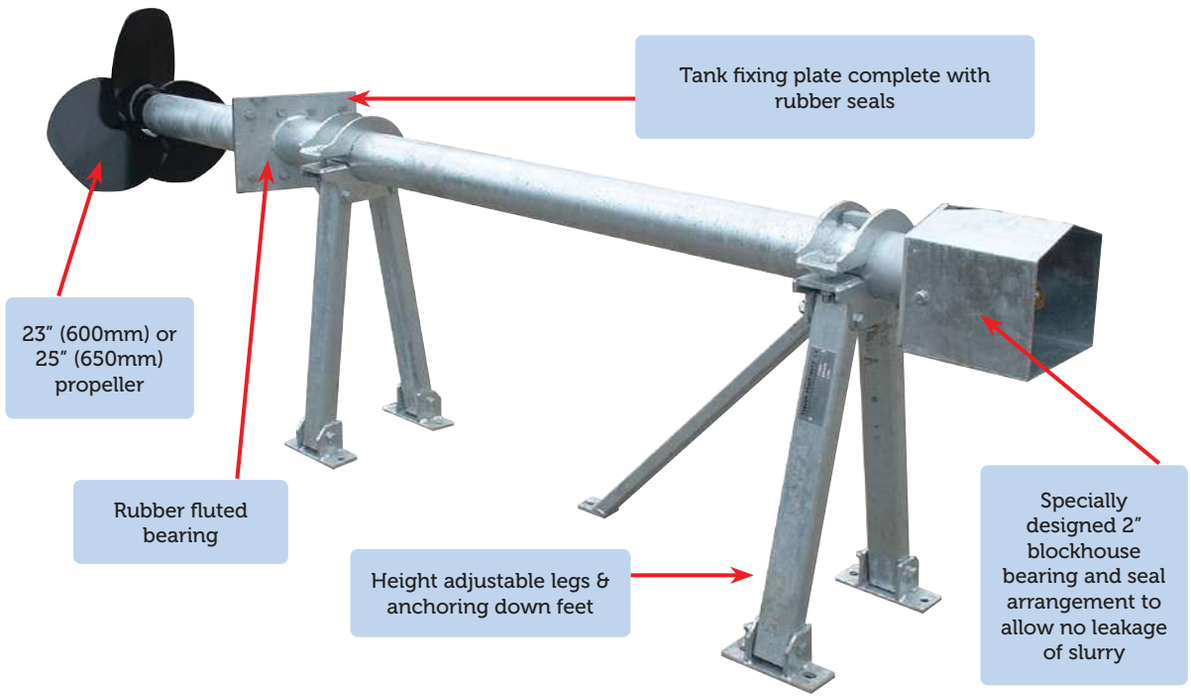
Tank Wall Mixer PTO or Electric

This machine is ideal for regular use to help prevent crust build-up and sediment build-up in above ground slurry storage tanks. To prevent any vibration against the wall of the tank, the machine is fitted with five stabiliser legs which are anchored down to a concrete pad. Only the propeller is inside the tank to allow no obstruction of slurry movement.

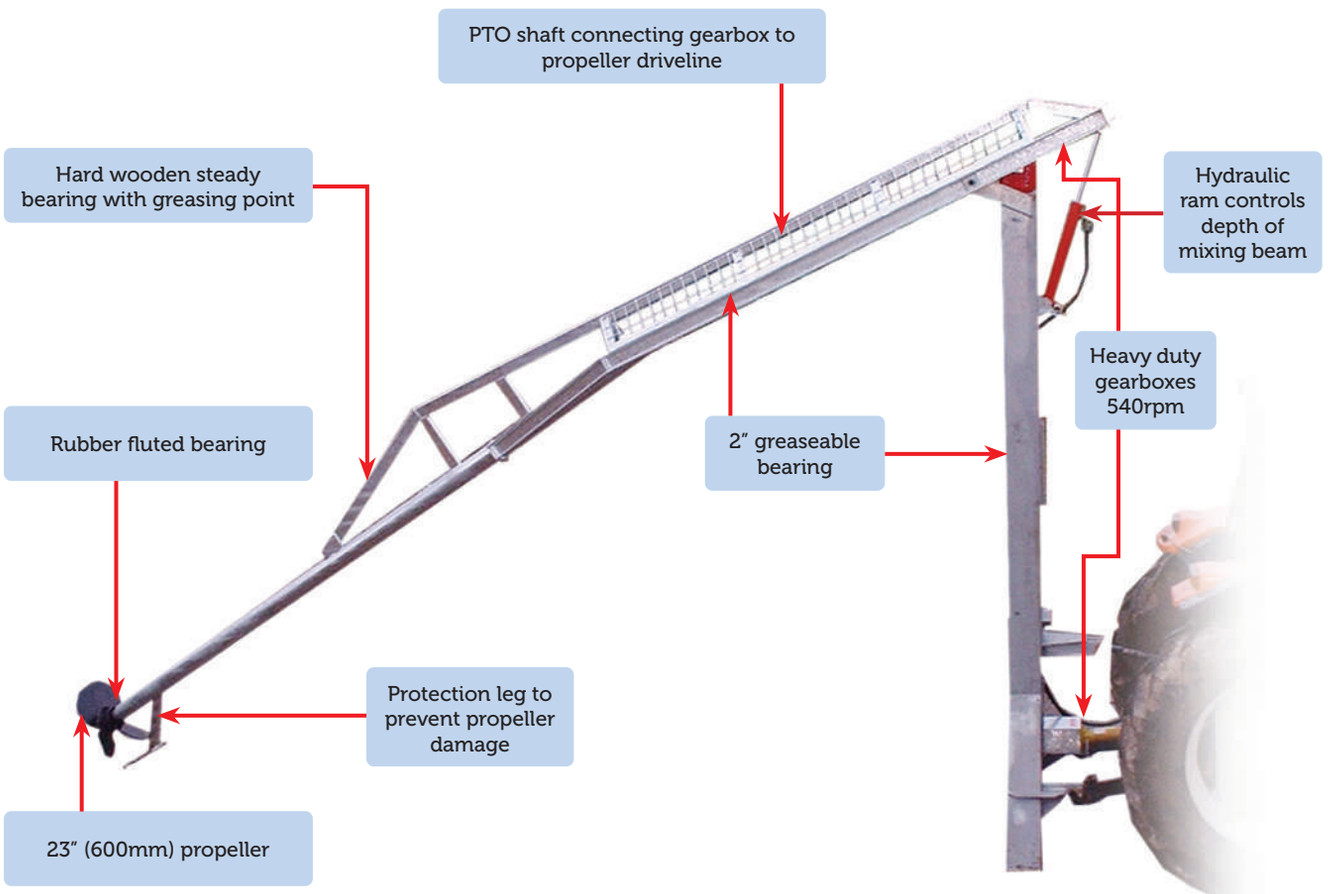


Technical Details

- 45-52 kW (60-70hp) required for 600mm (2') propeller
- 75-90kW (100-120hp) required for 650mm (2' 2") propeller
- 540 RPM
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 2" (50mm) Drive shaft
- 2" (50mm) Bearing & slurry seal
- Height adjustable legs & anchoring feet
- Tank fixing plate c/w rubber seal
- Rubber fluted propeller bearing
- 2.7m x 2.7m x 0.2m (9' x 9' x 8") Concrete base required
- 1200m³(260,400 gal) mixing capacity (15m/50' diameter)
- 1365m³ (300,000 gal) mixing capacity (21m/70' Diameter)

Tankmaster

The Tankmaster is the perfect machine for breaking up heavy crusts which build-up on top of above ground slurry storage tanks. This machine can be moved to different positions around the tank on the tractor 3-point linkage. The mixing beam is controlled by a hydraulic ram allowing the propeller to mix at different depths, enabling the solids and the water content in the tank to be mixed together giving a better slurry consistency.



Technical Details

- 60 - 75kW (80-100 hp) power required
- 540 RPM heavy duty gearboxes
- Hydraulic ram controls depth of beam (1xSA)
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 2" (50mm) propeller drive shaft
- 2" (50mm) Greasable bearings
- Hard wooden steady bearing with grease point
- Rubber fluted bottom bearing
- 600mm (2') propeller
- 3000m³ (660,000 gal) Mix from 1 point
- Protection leg
- 25ft (7.6m) beam for models up to 14ft (4.3m)

Standard 25ft boom - Available in 7-14ft Tankmaster
Extended 30ft boom - Available in 7-23ft Tankmaster

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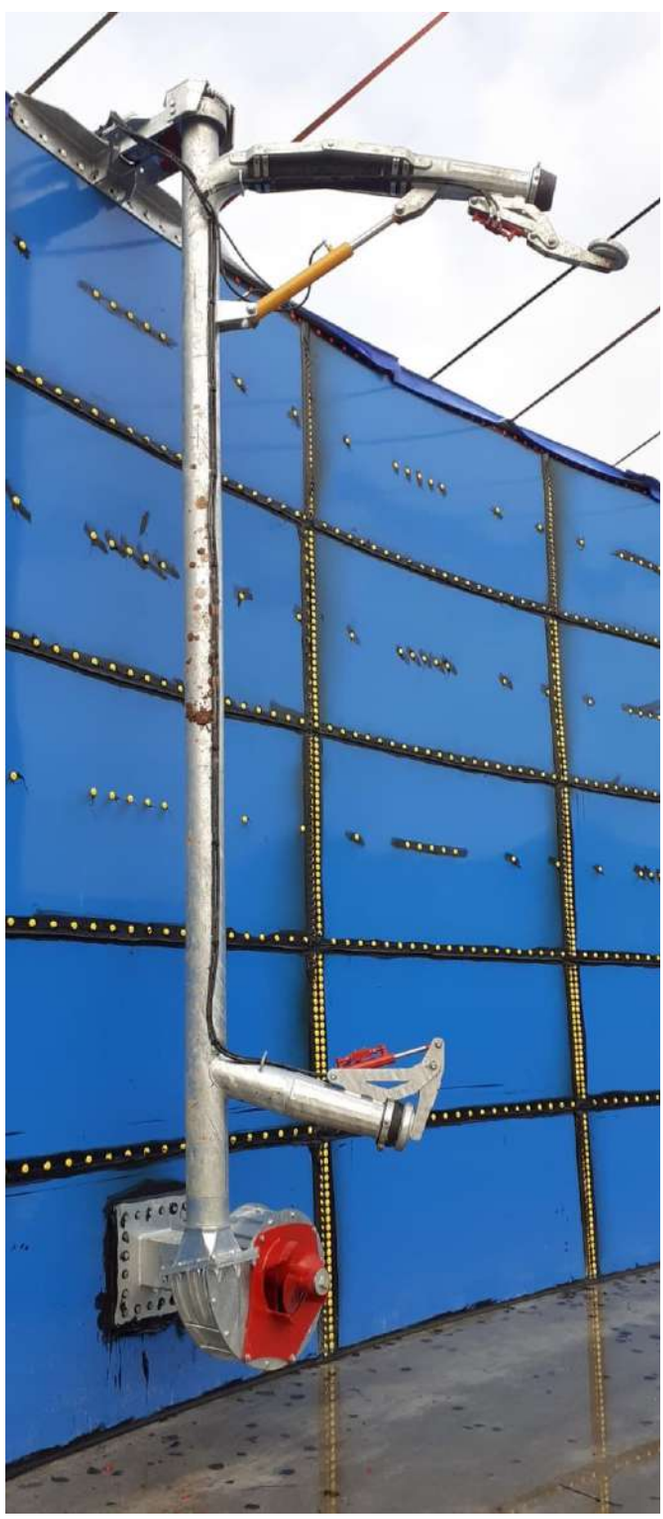
Harrier Mixer

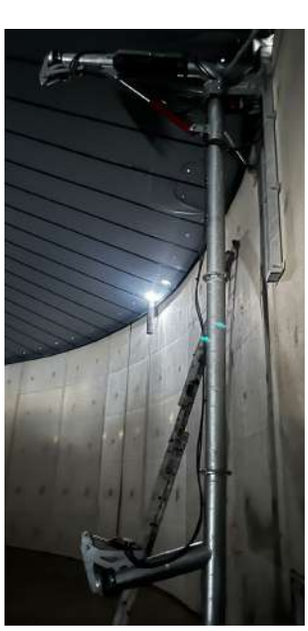
The Storth Harrier Mixer is a total mixing solution for tanks and is designed to mix medium to large size slurry stores. Now offering both steel & concrete store version, we can manufacture to a range of tank heights from 3.5m (12ft) to 7m (23ft).

This Harrier has the capability to run two jetters from the mixer, one for lower tank sediment and the other for jetting any stubborn upper crust and getting slurry in motion. The jetters' 180° rotation and 45° vertical movement capability aids with getting the tank mixed in a shorter period of time to help save on time and diesel.

Technical Details

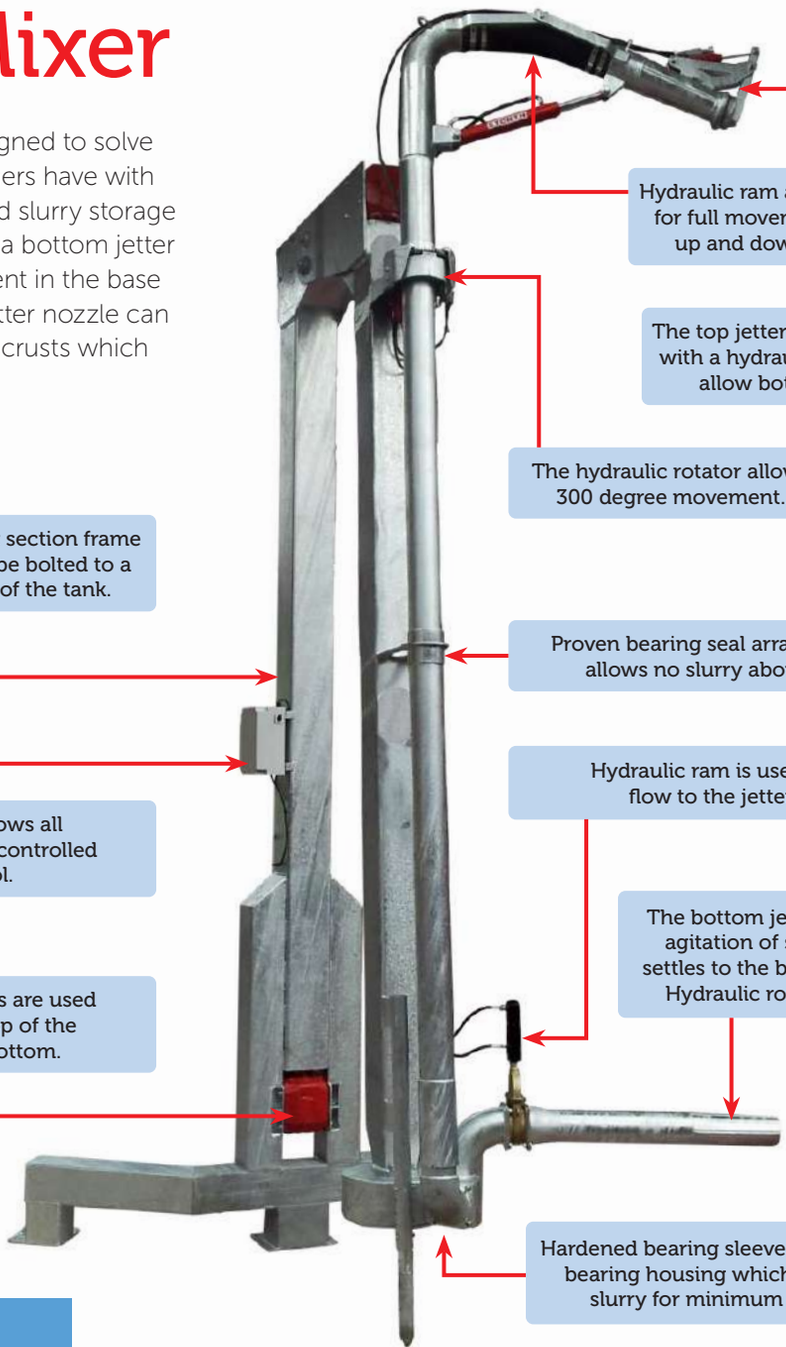
- 120-150kW (160-200 hp) power requirement
- 1000 RPM
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 55mm (2' 2") Drive shaft
- Special 55mm (2.2") bearing & slurry seal
- Height adjustable legs & anchoring feet
- Tank fixing plate c/w rubber seal
- HD Rubber fluted bearing cassette
- Two jetters:
  - » Lower jetter for lower tank sediment
  - » Top jetter with 180° rotation, 45° up-down
- 18,155l/min (4000 gal)
- 4,000m³ (880,000 gal) Mix from 1 point
- Available for steel or concrete tanks
- Can be used in conjunction with tension cover





Hawk Mixer

This machine has been designed to solve the problem that many farmers have with agitating large, above ground slurry storage tanks. The Hawk Mixer uses a bottom jetter nozzle to agitate any sediment in the base of the tank, whilst the top jetter nozzle can be rotated to break up large crusts which form at the top of the tank.



Hydraulic ram allows for full movement up and down.

The top jetter nozzle is complete with a hydraulic shut off ram to allow bottom agitation.

The hydraulic rotator allows 300 degree movement.

Fully galvanised heavy duty box section frame with 3 leg mounting points to be bolted to a concrete pad on the outside of the tank.

Proven bearing seal arrangement which allows no slurry above this point.

Hydraulic ram is used to control flow to the jetter nozzle.

Control panel which allows all hydraulic movement to be controlled by a remote control.

The bottom jetter nozzle allows agitation of sediment which settles to the bottom of the tank. Hydraulic rotation available.

Large heavy duty gearboxes are used throughout, two at the top of the machine & one at the bottom.

Hardened bearing sleeve with polyurethane bearing housing which is lubricated by slurry for minimum maintenance.

The Storth Hawk Mixer & Trailer is designed to be used in two options. The machine can stay attached to the trailer to pump/mix as the hydraulic legs fold down to hold a stable position. Or the Hawk can be detatched from the trailer and attached to the tractor giving flexibility around the tank.

Technical Details

- 120-150kW (160-200 hp) power requirement
- 1000 RPM Heavy duty gearboxes (1xbottom, 2xtop)
- Hydraulic service 1xSA, free flow return
- Full hydraulic movement via remote control
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 3 remote greasable bearing assemblies
- Special bearing slurry seal-stop
- Rubber fluted bearing cassette
- Two jetters
- Lower jetter for lower tank sediment
- Top jetter with 300° rotation, 45° up-down
- 18.2m³/min (4000 gal) Flow
- 8,000m³ (1,760,000 gal) Mix from 1 point
- Available in 10ft-24ft (3m-7.3m)

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Hydraulic Kite Mixer

The Hydraulic Kite Mixer has been designed for versatile use in most slurry storage options. The hydraulic motor requires a minimum of 100l per minute to give performance to the propeller head. The 250rpm long galvanised frame has pallet fork holders and safety locking pins allowing most applications to be reached. Optional telehandler frame-bracket or excavator attachments are available. In the propeller head we have a unique triple seal system as protection to the hydraulic motor. This ensures no slurry enters the hydraulic system causing damage. 3/4" hydraulic hoses are used on the Hydraulic Kite Mixer with a pressure relief valve set at a maximum of 200bar to protect the machine from any damage.

Technical Details

- Hydraulic drive (3/4" hoses)
- 275 RPM @ 100l/min
- 475 RPM @ 190l/min
- Minimum oil flow 100 l/min
- Maximum oil flow 190 l/min
- Fully galvanised metal work for extended product life
- Pallet fork mounting
- Handler brackets optional (can be used alongside pallet forks)
- 200 Bar pressure relief valve
- Adjustable head angle
- Motor size 400cc
- Unique motor 'Storth Triple Seal System' (STSS)
- 900mm (3') propeller
- Available in 5m, 7m, 9m
- Weight 900 - 1000 kg
- 3000m³ (660,000 gal) mix from 1 point

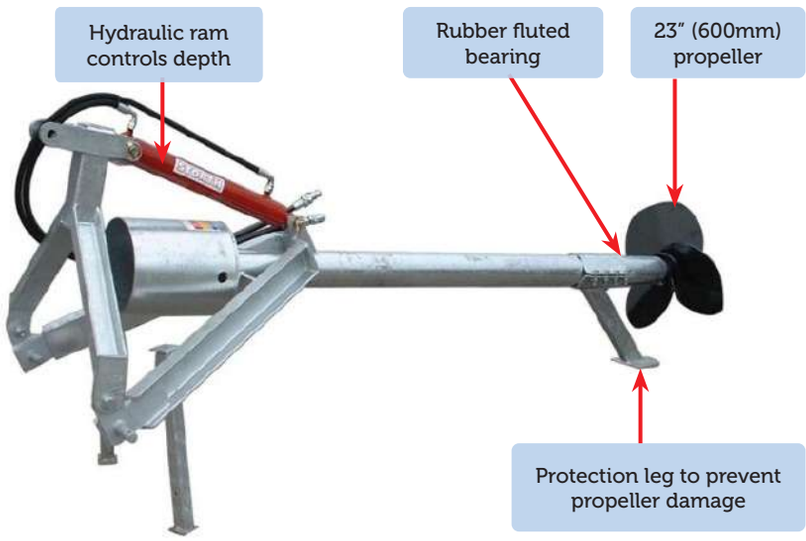
Telehandler Frame

Under Slat Agitator

Technical Details

- 45-52 kW (60-70 hp) power required
- 540 RPM
- Hydraulic depth adjustment 1xDA
- Wide angle PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 2" (50mm) Bearing
- Rubber fluted bottom bearing
- Propeller protection leg
- 600mm (2') bolt on propeller
- 9ft (2.7m) length
- 400m³ (88,000 gal) mix from 1 point

The machine to mix smaller underground tanks and small slatted sheds with limited access holes. The machine is easily controlled and placed into position with a hydraulic ram and wide angle PTO shaft.



Slalom Lagoon Mixer Hydraulic Depth Control & Cowl

Technical Details

- 45-52 kW (60-70 hp) power required
- 540 RPM
- Hydraulic depth adjustment 1xSA
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 2" (50mm) Bearing
- Slide bar protection for main tube
- Hard wooden steady bearing with grease
- Rubber fluted bottom bearing
- Propeller protection leg
- 600mm (2') bolt on propeller
- 2,500 m³ (550,000 gal) Mix from 1 point

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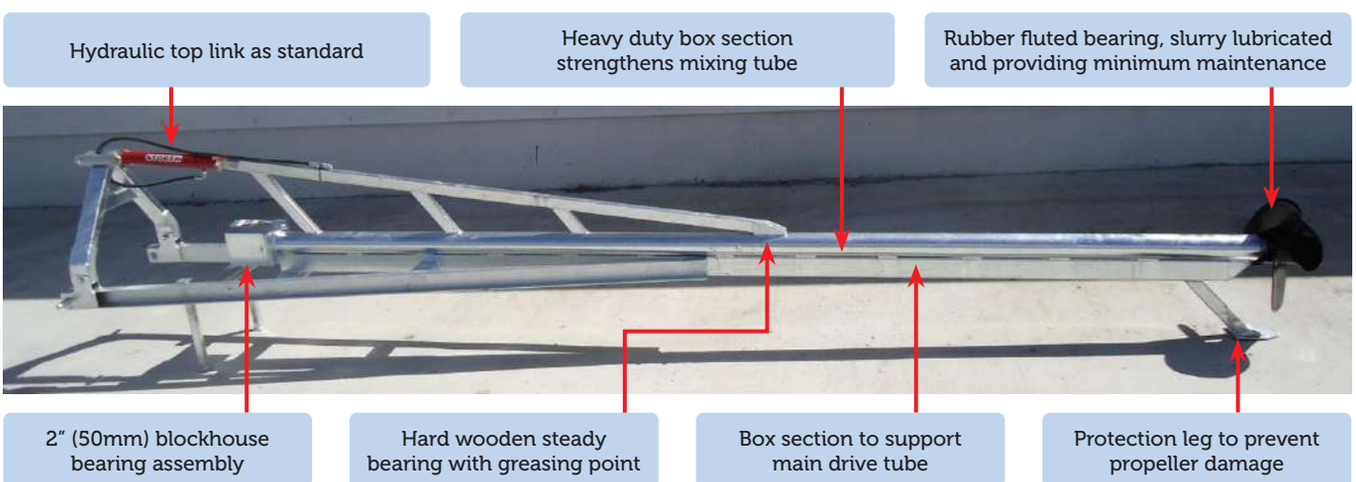
Farmer Lagoon Mixer

The Storth Lagoon Mixer is the ideal machine to mix smaller capacity lagoons, allowing aggressive mixing action with a minimum input of power. This machine is easily operated with all machines having a hydraulic top link allowing accurate positioning of the machine in the slurry. Storth Lagoon Mixers are built to last with the machine being fully galvanised and strengthened with a heavy duty box section placed underneath the mixer tube.



Technical Details

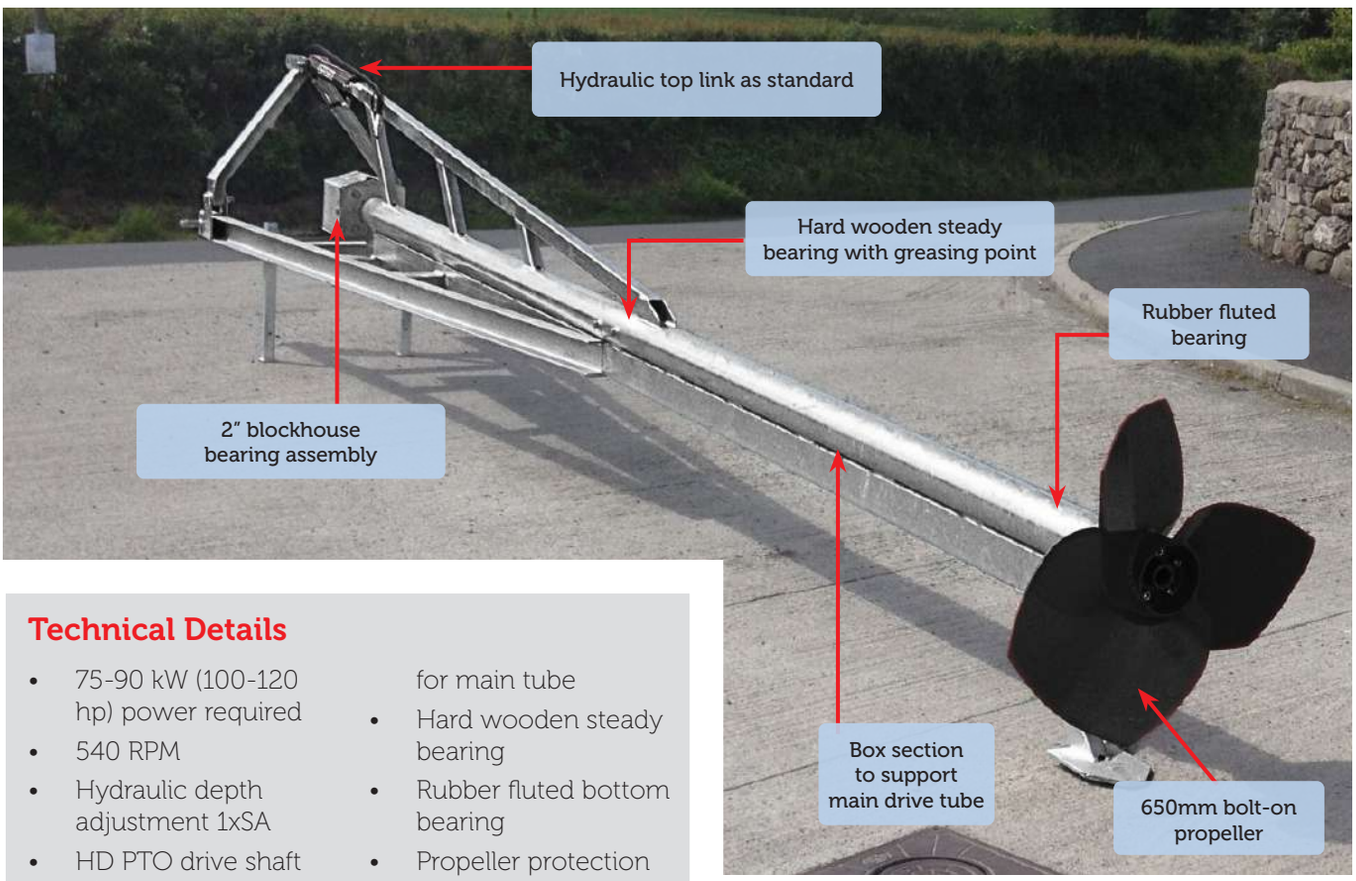
- 45-52 kW (60-70 hp) power required
- 540 RPM
- Hydraulic depth adjustment 1xSA
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 2" (50mm) Drive shaft
- 2" (50mm) bearing
- Slide bar protection for main tube
- Hard wooden steady bearing
- Rubber fluted bottom bearing
- Propeller protection leg (cow horn on 25')
- 600mm (2') bolt on propeller
- 2,500m³ (550,000 gal) mix from 1 point

Models Available

15ft (4.6m) length 20ft (6.1m) length 25ft (7.6m) length

FarmerPlus Lagoon Mixer

The Storth Heavy Duty Lagoon Mixer IS designed to suit medium size lagoons, with the new propeller shape and larger 650mm (2' 2") diameter, we have produced an aggressive mixing action with the input power of 100-120hp required.



Technical Details

- 75-90 kW (100-120 hp) power required
- 540 RPM
- Hydraulic depth adjustment 1xSA
- HD PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 2" (50mm) Drive shaft
- 2" (50mm) Bearing
- Slide bar protection for main tube
- Hard wooden steady bearing
- Rubber fluted bottom bearing
- Propeller protection leg
- Propeller protection cow horn (25' model)
- 650mm (2' 2") bolt on propeller
- 3,000m³ (660,000 gal) Mix from 1 point

Models Available
15ft (4.6m) length
20ft (6.1m) length
25ft (7.6m) length

Pivoting Mixer

Available to allow access into smaller tanks and under slats. Built to the same specification as the Lagoon Mixer.

Models Available
(Pivoting Mixer)
15ft (4.8m) length
20ft (6.1m) length

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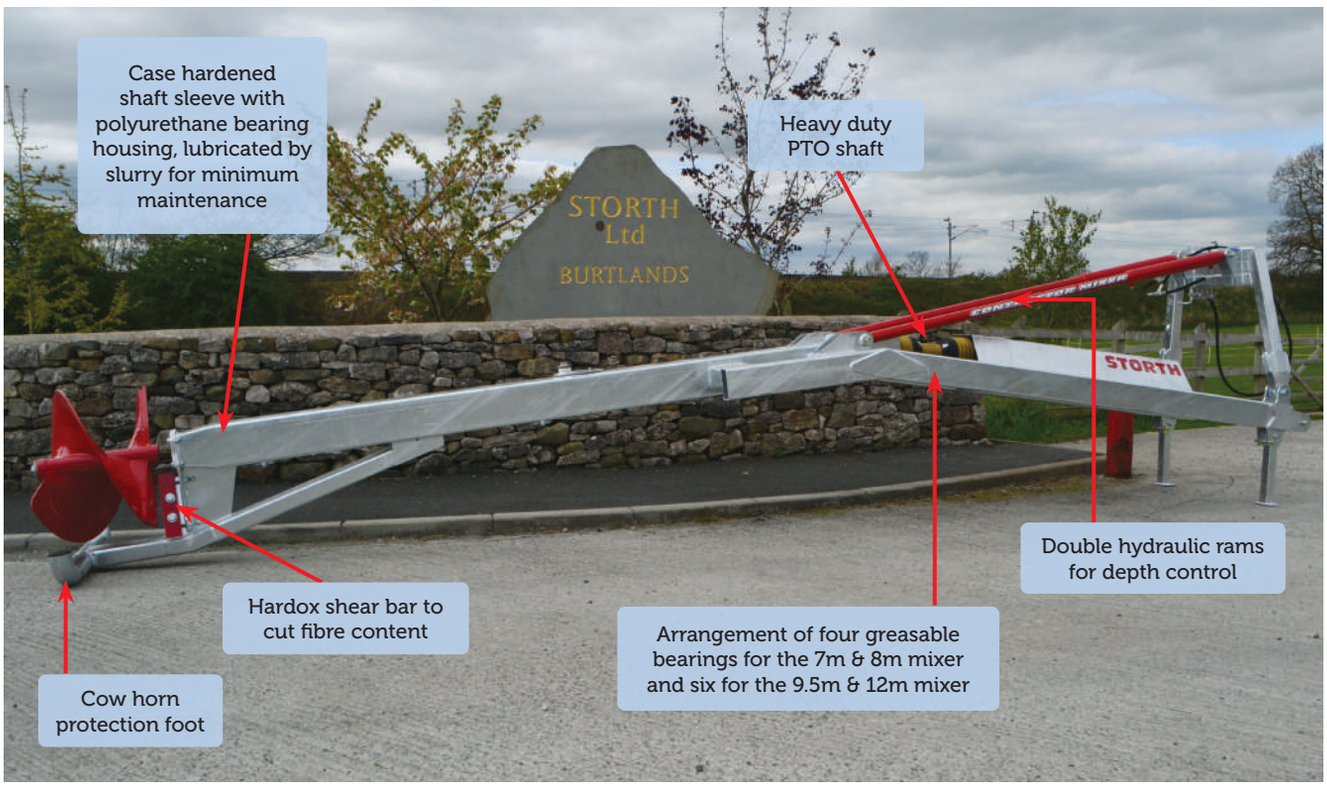
Contractor Mixer

The Storth Contractor Mixer is the ultimate propeller mixer designed to provide intensive propeller mixing action for the contractor or larger farm. The depth control of this machine is by a double set of hydraulic rams, allowing mixing at different depths of the lagoon giving a better slurry consistency. Fully galvanised heavy duty box section chassis gives this machine unrivalled strength and life expectancy.



Technical Details

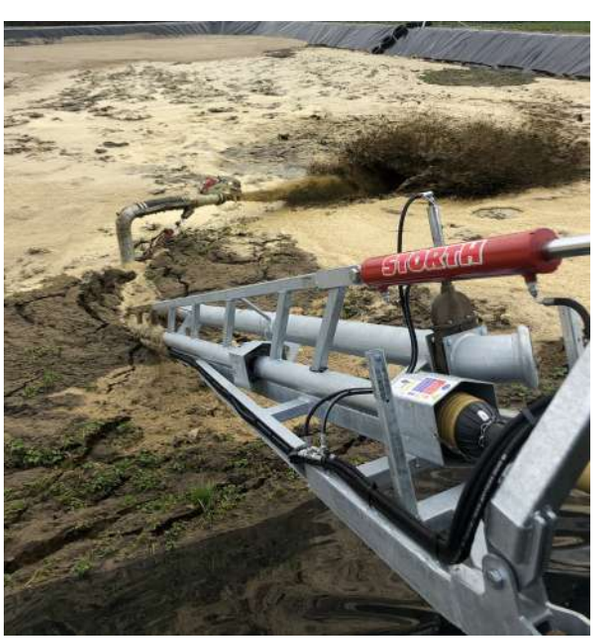
- 90 kW (120 hp) power required
- 540 RPM
- Twin hyd ram depth control (1xSA hyd service)
- HD PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- 15° Frame angle
- 55mm (2.2") Drive shaft
- Drive shaft protective collar
- 5 Bearing assemblies
- Special bearing slurry seal-stop
- Rubber fluted bottom bearing cassette
- Adjustable hardox shearbar
- Cow horn foot
- 700mm (2' 3") bolt on propeller
- 4,000m³ (880,000 gal) Mix from 1 point

Models Available

23ft (7.0m) length - Mixing depth of 4.5m
26ft (8.0m) length - Mixing depth of 5.5m
31ft (9.5m) length - Mixing depth of 7.5m
39ft (12.0m) length - Mixing depth of 7.5m

Kestrel Mixer

Built with our well-known Mega Mix in mind, the Kestrel mixer offers the same benefits in terms of being able to mix whilst also having the facility to pump out of lagoons via a 6" side discharge pipe. The kestrel has a slightly smaller build compared to the Mega Mix, to accommodate those without the need for the mixing capacities of the Mega Mix.



Technical Details

- Power requirement 90-112 kW (120-150 hp)
- 1000 RPM
- HD PTO drive shaft c/w shear bolt, WA c/w shear bolt
- Fully galvanised metal work for extended product life
- Hydraulic depth adjustment 1x SA
- Sturdy headstock to withstand lateral forces
- 6" side discharge pipe
- Robust 50mm (2") drive shaft & bearings
- Heavy duty main tube protection bar
- Hard wooden steady bearing
- Low maintenance Storth wet run fluted bottom bearing
- 4 Blade impellor
- Intake auger
- 300° Hydraulic spout rotation c/w hydraulic control
- Cow horn impellor leg protection
- High output induction impellor, 12.5 m^3/min (3300gal/min)
- 3,000m^3 (660,000 gal) Mix from 1 point

Available Model	7.5m (25ft) length

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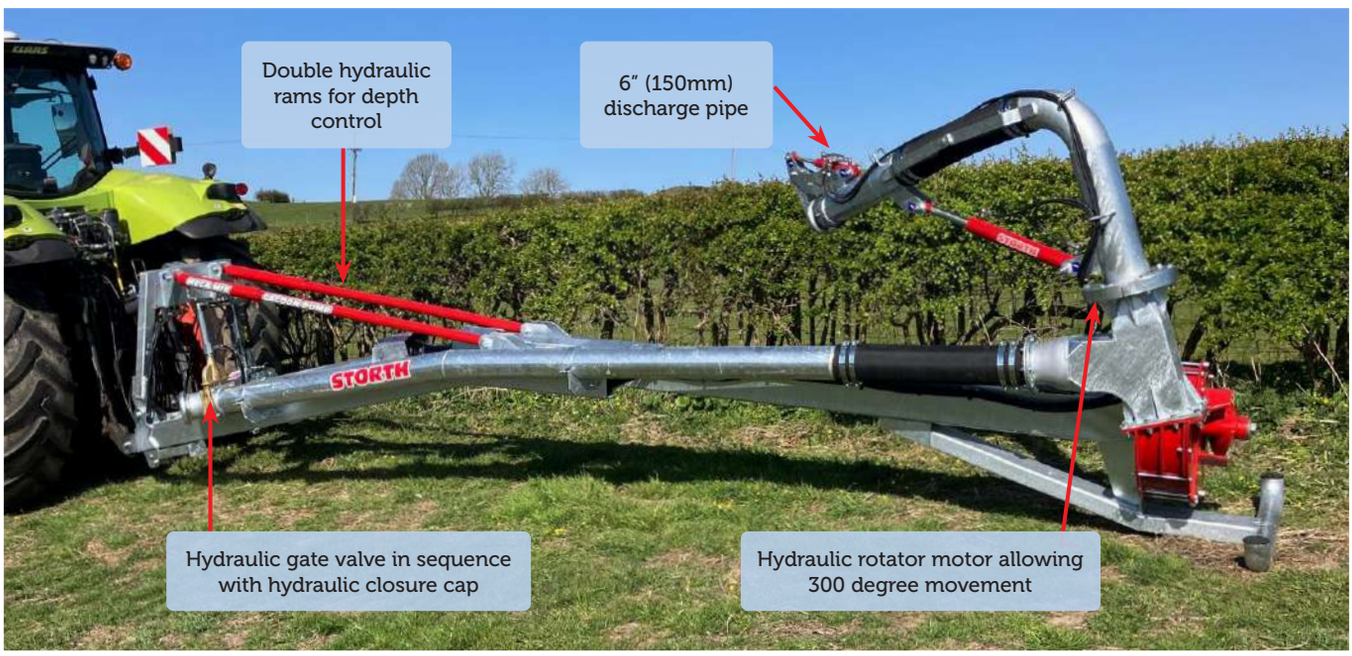
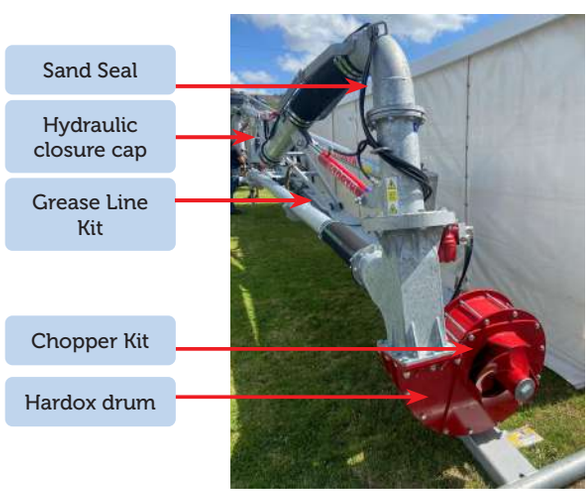
Mega Mix Lagoon Pump

Storth have designed this machine to benefit from the great mixing capacity of the Mega Mix whilst having the facility to pump out of the lagoon with the same machine via a 6" side discharge pipe. This provides the user with great benefits, offering several possibilities for filling open top tankers, pumping to other lagoons and priming umbilical pumps, all from one machine.





Models Available

23ft (7.0m) length – Mixing depth of 4.5m
26ft (8.0m) length – Mixing depth of 5.5m
31ft (9.5m) length – Mixing depth of 7.5m
39ft (12m) length – Mixing depth of 9.5m

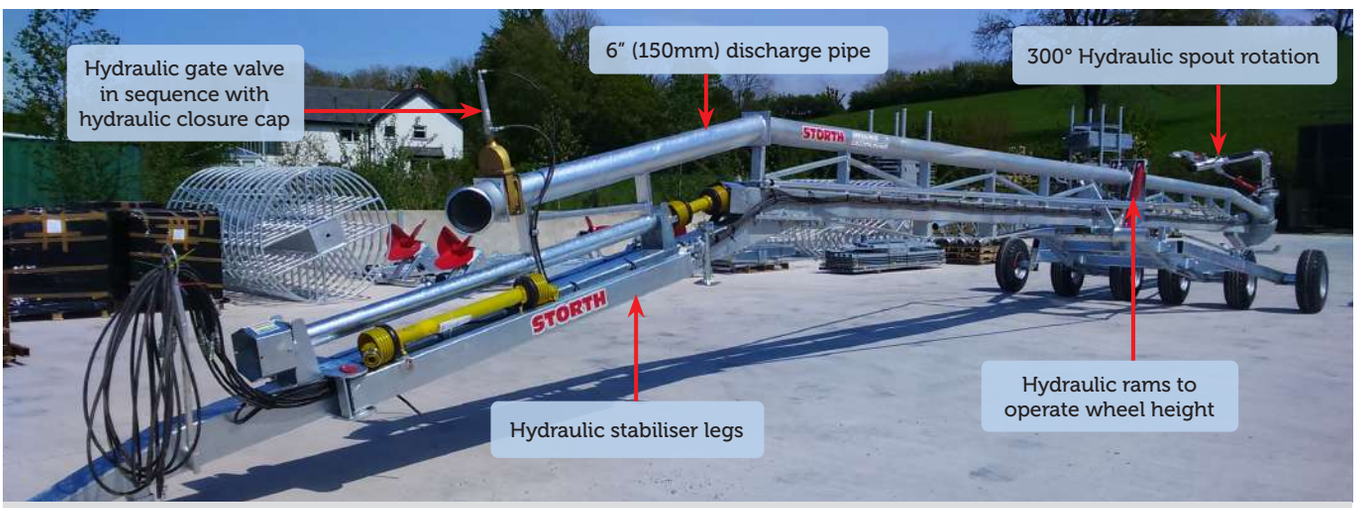
Technical Details

- 112-150 kW (150-200 hp) power required
- 1000 RPM
- Hydraulic services 1xSA, 3xDA
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- Grease line kit
- 15° Frame angle
- Twin hyd ram depth control (1xSA)
- 6" side discharge pipe
- 55mm (2.2") Drive shaft
- Drive shaft collar
- 5 Bearing assemblies (minimum)
- Special bearing slurry seal-stop
- Rubber fluted bottom bearing cassette
- 4 Blade impeller
- Intake auger
- Chopper kit
- Available with/without Hardox Drum & Sand Seal
- 300° Hydraulic spout rotation
- 60° Hydraulic spout vertical adjustment
- Hydraulic closure cap
- 20.5m³/min (4500 gal) Flow
- 4,500m³ (1,000,000 gal) mix from 1 point

Trailed Mega Mix Lagoon Pump

The final machine in the Mega Mix range, this machine has been developed for lagoons with steeper banks, which require a deeper reach into the lagoon without needing a lot of horsepower to lift on 3-point linkage.

This machine uses the same quality components and high class engineering as the Mega Mix and the Mega Mix Lagoon Pump; this has hydraulically operated wheels and hydraulic stabiliser legs.



Technical Details

- 112-150 kW (150-200 hp) power required
- 1000 RPM
- Hydraulic services 4xDA
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- Grease line kit
- 15° Frame angle
- Twin hyd ram depth control (1x DA)
- 8" Side discharge pipe
- Mechanical stabiliser arms
- 55mm (2.2") Drive shaft
- Drive shaft collar
- 7 Bearing assemblies (minimum)
- Special bearing slurry seal-stop
- Rubber fluted bottom bearing cassette
- 4 Blade impeller
- Intake auger
- Chopper kit
- 300° Hydraulic spout rotation
- 60° Hydraulic spout vertical adjustment
- Hydraulic closure cap
- Available in 12.5m, 14m, 17m, & 20m
- 20.5m³/min (4500 gal) Flow
- 5,500m³ (1,200,000 gal) mix from 1 point

Ultra Mix

Technical Details

- 199-221 kW (270-300 hp) power required
- PTO drive shaft c/w shear bolt
- Fully galvanised metal work for extended product life
- Grease line kit
- 15° Frame angle
- Twin hydraulic ram depth control (1xSA)
- 12" side discharge pipe
- 55mm (2.2") drive shaft
- 4 Blade impeller
- Intake auger
- Chopper kit
- 300° Hydraulic spout rotation
- 60° Hydraulic spout vertical adjustment
- Twin 8" outlet drum
- 6,500m³ (1,400,000 gal) mix from 1 point

Mega Mix Ancillary Options

Transport Trailer

Transport trailers are fully galvanised and can be adapted to carry fill pipes and flexi pipes at the customer's request.

Tanker Filler Pipe Options

Wheel & Cage Kit

We have developed a wheel protection kit suitable for lined lagoons and for covered lagoons. We have also developed a cage protection kit. All extras are available to the Mega Mix range.

Submersible Mixer

A submersible mixer is designed to operate while fully submerged in slurry, ensuring continuous operation without the risk of cavitation. It is made from wear-resistant materials and incorporates a mechanical seal protection with leak sensor. The benefit of a submersible mixer is that it is out of the way in a tank meaning no above ground parts that could be in the way when space is at a premium.

The robust construction, well-engineered design and high-quality components assure the best mixing results for your slurry. The submersible mixers ensure long lasting operation with minimal service requirements. From 7.5 kW to 18.5 kW models, we offer a wide range of submersible mixers to cover all your mixing needs.

	DK75	DK110	DK150	DK185
Motor Power (kW)	7,5	11	15	18,5
Voltage & Frequency (V/Hz)	400/50	400/50	400/50	400/50
Motor Speed (RPM)	1450	1450	1450	1450
Propeller Speed (RPM)	325	325	325	325
3-Blades Propeller Flow Rate (m^3/h)	3800	5500	6900	7500
Weight	214	225	405	416
Dimensions (WxHxD) (mm)	620x620x985	660x660x1010	730x730x1325	790x790x1350

System Advantages

- Automatic slurry mixing management
- Low 3 Phase electric running cost
- Minimum noise disturbance
- Low health & safety risk (no pto shaft ...)
- Adaptable installation in above or below ground tanks
- Versatile within an automated system (separator)

Technical Details

- Flexible manual, timer or float switch control system
- Soft start, power efficient motors 7.5 kW (10Hp) to 18.5 kW (24Hp)
- Safety thermosensor in the windings
- Mixer rating IP68 c/w 10m of cable
- Corrosion resistant stainless steel mixer shaft (1450 rpm)
- Mechanical seal protection with leak sensor
- Stainless steel 3 blade impeller
- High capacity from 3800 to 7500 m^3/hr (13900 to 26,500 gal/min)

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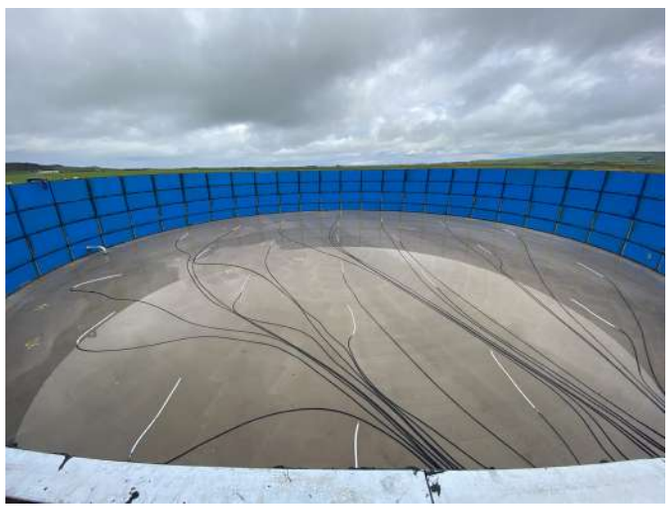
Slurry Aeration System

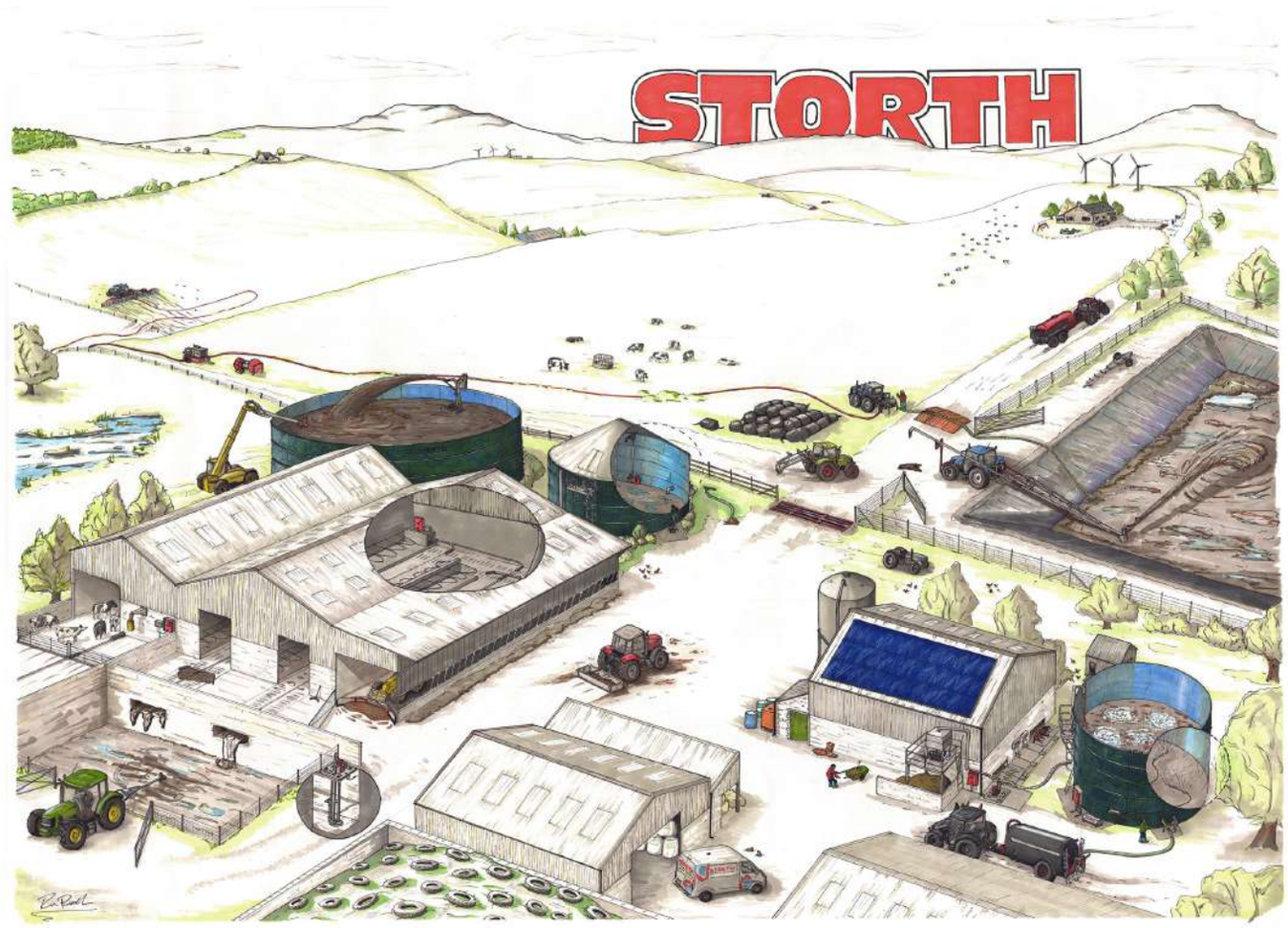
Storth's Slurry Aeration System is an extremely cost-effective and environmentally friendly method of keeping slurry in a uniform, consistent and pumpable state, whilst capturing the Ammonium Nitrogen content in the slurry. Ammonium Nitrogen in your slurry store can be increased by between 100% to 400%. This system has the capability to produce better slurry, increased grass yield and reduces the requirement for artificial fertilisers.



The system works on a low-pressure, high-volume basis, with our robust, energy-efficient pump and drive unit supplying air via the manifold banks to negative buoyancy diffusers. The unique diffusers require no internal fixing and there is no requirement for the slurry store to be emptied to install Storth's Slurry Aeration Systems. Each diffuser is fed air for a set period of time, with the rising fine air bubbles mixing and aerating the slurry to create a vastly beneficial aerobic environment with no need for further agitation. Fine bubbles need less energy to create, while providing a much greater surface area for oxygen transfer to occur. Air is provided by compressors and can be supplied to suit a single or 3 phase supply.

Slurry Aeration (Slurry Mixing)	Slurry Aeration (Separated Slurry)
• Mix and prevent crusting • Plant friendly fertiliser • Fully automatic system • Low operating costs • Minimal maintenance • Easy to install • Uniform slurry 24/7, 365 days a year • No internal tank fixings • Savings in fuel, labour & fertilisers • No need for an empty tank to install	In addition to 'slurry mixing' benefits..... • Captures more lost Nitrogen • Enhance grass growth • Reduce odours • Eliminate lethal and toxic gas • 70% Increase in ammonia nitrogen • 45% Increase in nitrogen • 40% Reduction in methane

Notes:



Notes:

SCRAPE IT

PUMP IT

SEPARATE IT

STORE IT

MIX IT

APPLY IT

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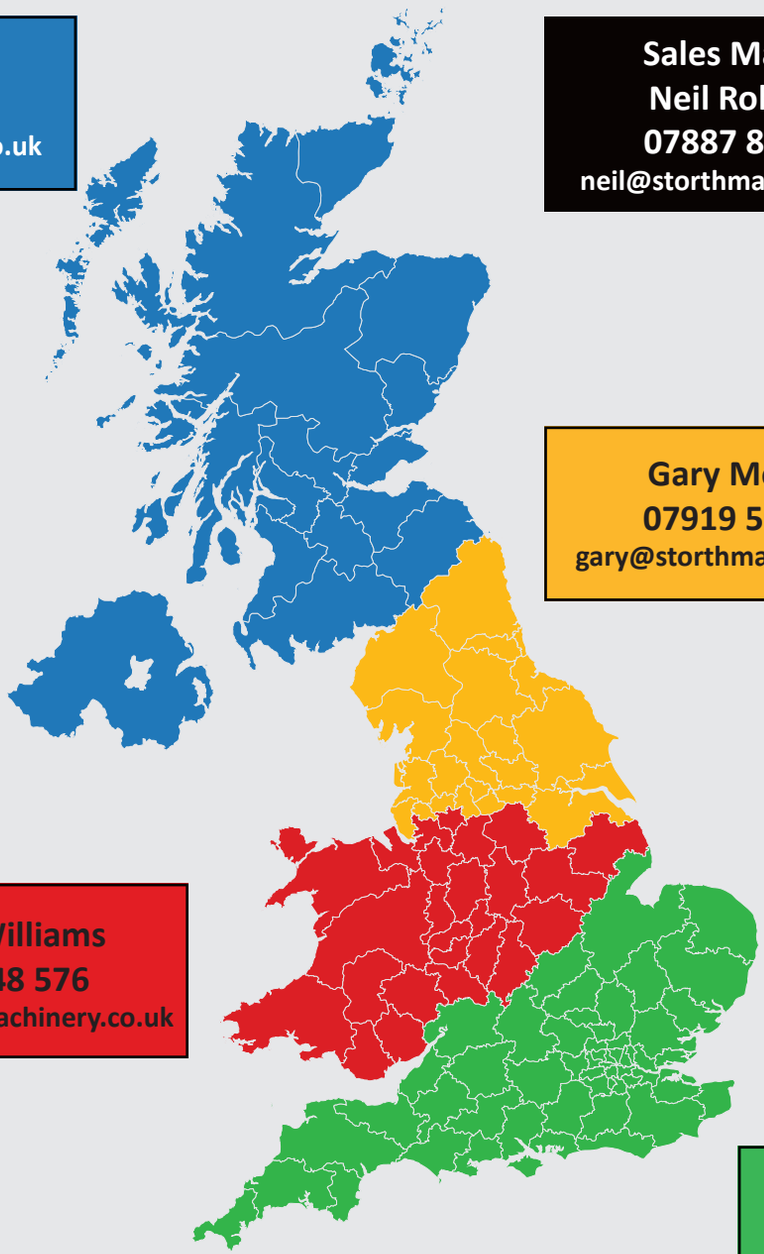
For additional information and advice please contact your Storth representative



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