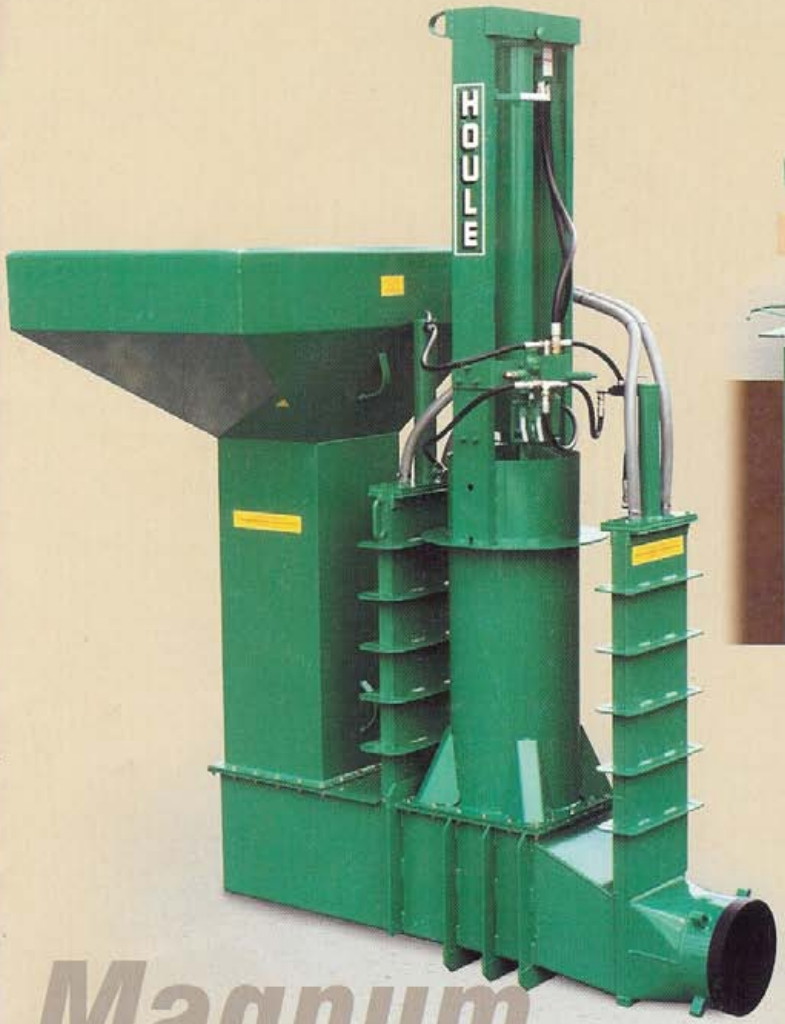
UNDERGROUND MANURE PUMPS



Magnum

Electromix

Futuro

HOULE

Systems proven for their outstanding reliability and efficiency.

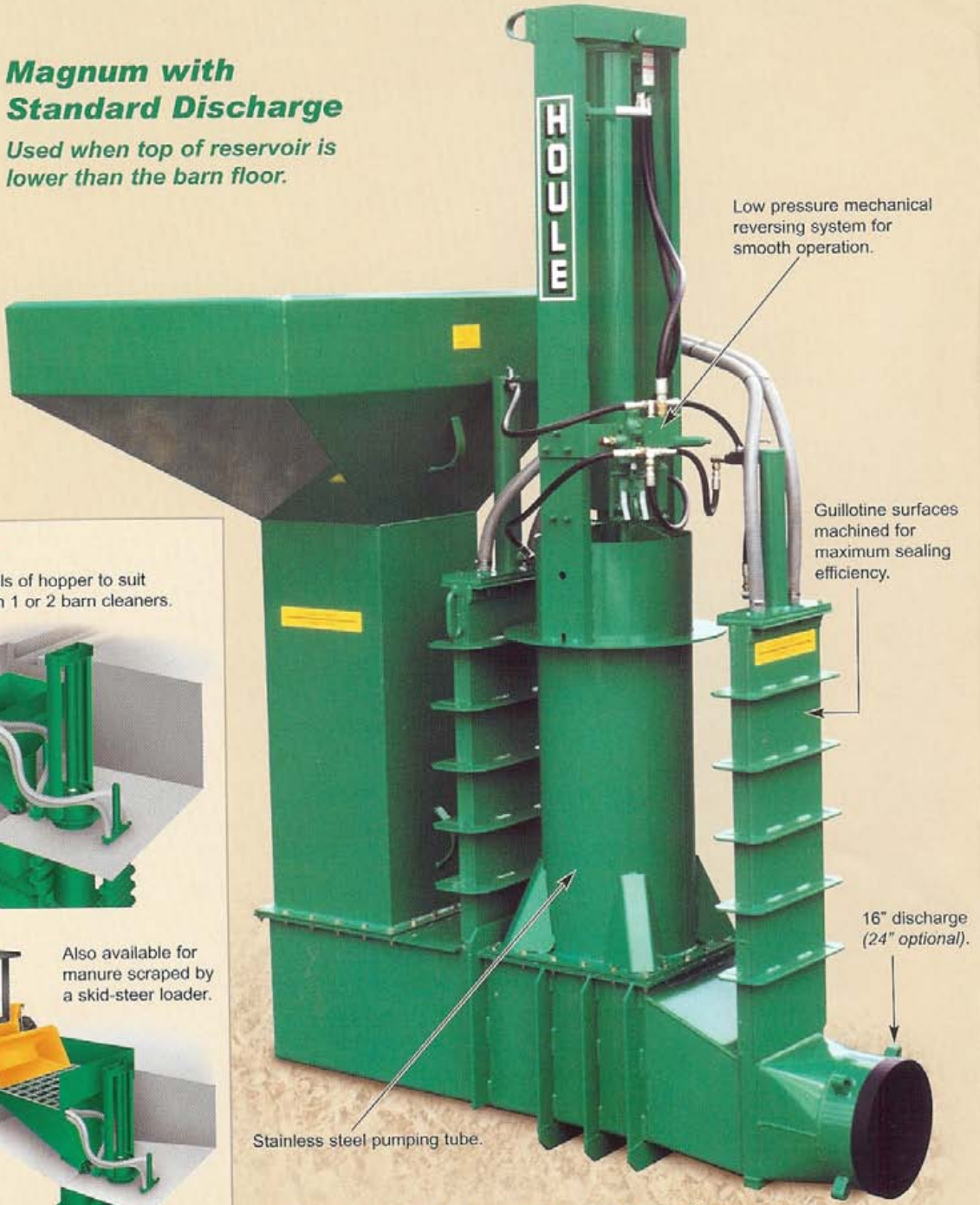
Magnum

*Field proven for over 25 years to evacuate dairy manure.**

Tied Stall
Free Stall
Straw Sawdust Sand *

Magnum with Standard Discharge

Used when top of reservoir is lower than the barn floor.



Hopper

Different models of hopper to suit installation with 1 or 2 barn cleaners.

Also available for manure scraped by a skid-steer loader.

*Water addition may be required. Straw bedding up to 40 lbs per 10 milking cows per day. Performance varies according to installation, manure consistency, quantity and type of bedding.

Discharge Options to Prevent Manure Flow Back

With spring loaded guillotine and 16" manual safety guillotine valve at discharge.

For tied and free stall manure ***without sand*** when top of reservoir is higher than the top of the barn floor.

With spring loaded flapper and 16" manual safety guillotine valve at discharge.

For free stall manure ***with sand*** when top of reservoir is higher than the top of the barn floor.

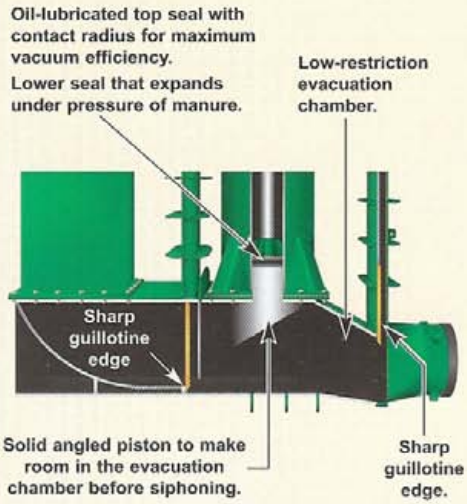
Working Principle

Siphoning Cycle

During the siphoning cycle, the evacuation guillotine shuts down, the hopper guillotine opens, and finally, the piston siphons the manure from hopper.

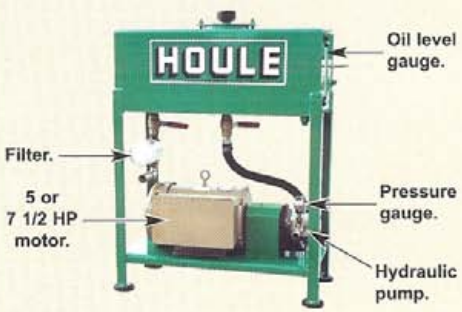
Evacuation Cycle

During the evacuation cycle, the hopper guillotine closes, the evacuation guillotine opens, and finally, the piston pushes the manure into the evacuation line.



Power Unit

for Magnum, Futuro and Electromix System



Electric oil heater available.

Futuro

Pump with large flapper valves actuated by pressure of manure to evacuate free stall slurry faster than the Magnum.*

*

Model with Hopper Installed in a Pit

Fed by a cross gutter or with a skid-steer loader.
Different models of hopper available.

Working

Siphoning Cycl

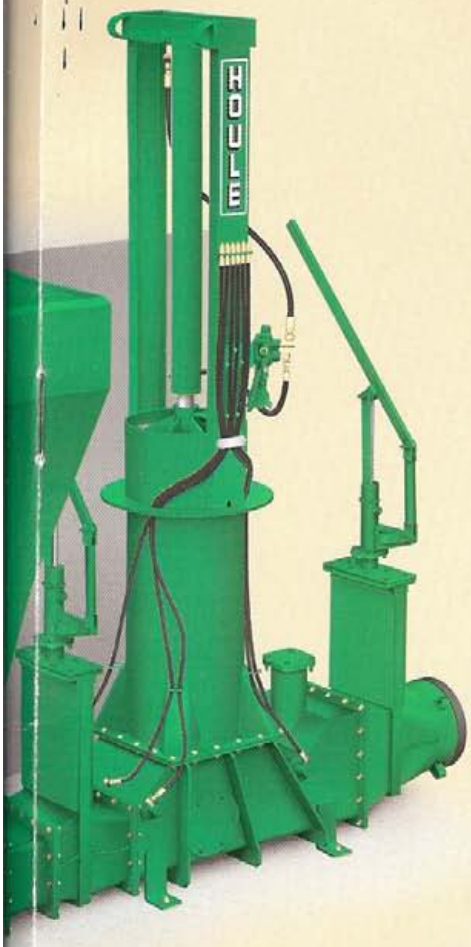
During the siphc vacuum opens t siphon the manu tube.

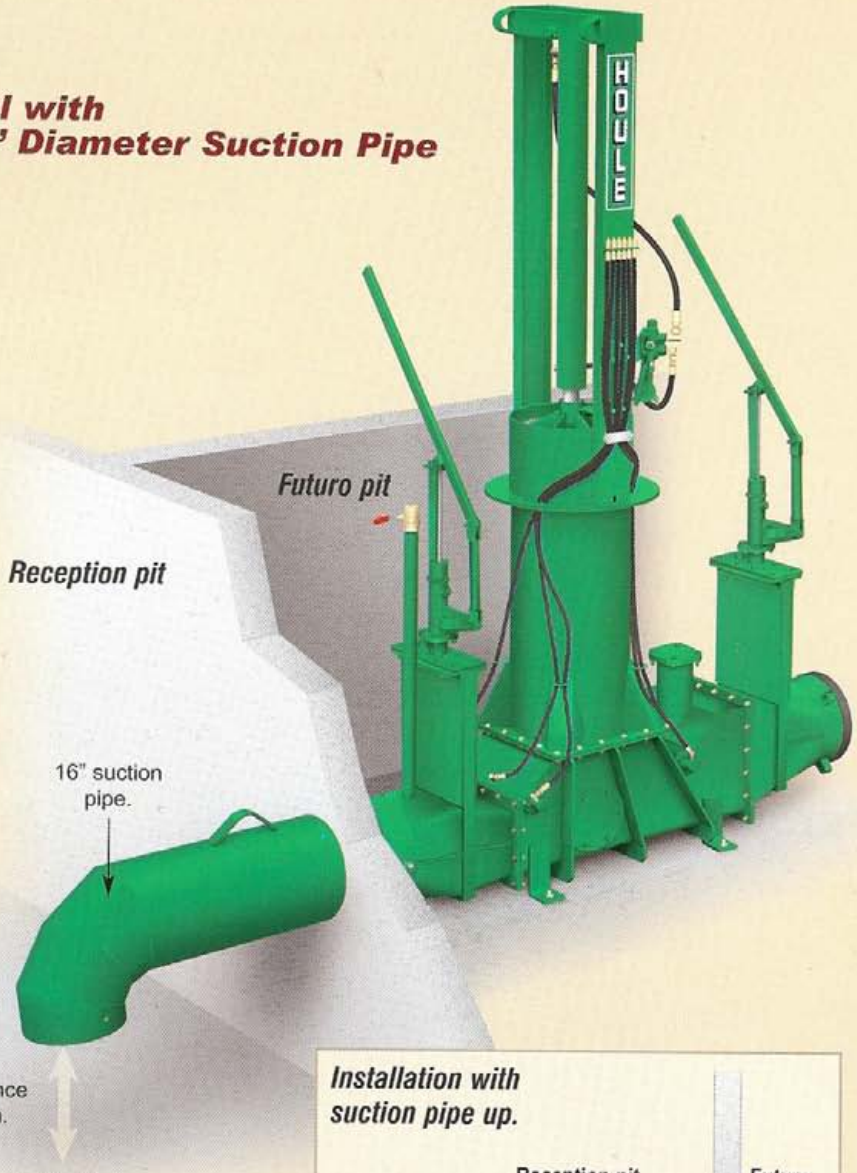
Evacuation Cyc

During the evac pressure closes opens the spring flapper. At the e cycle, the spring flapper.

**Water addition may be required. Performance varies according to installation, manure consistency, quantity and type of bedding.*

Model with 16" Diameter Suction Pipe





scharge.

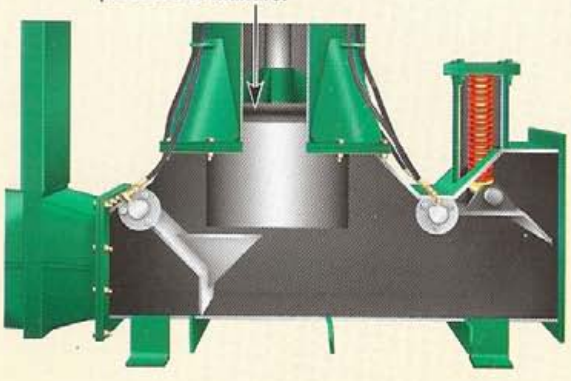
Principle

cle

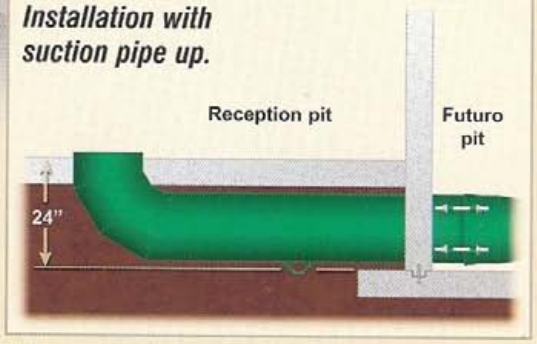
ioning cycle, the
the intake flapper to
ure into the pumping

ycle

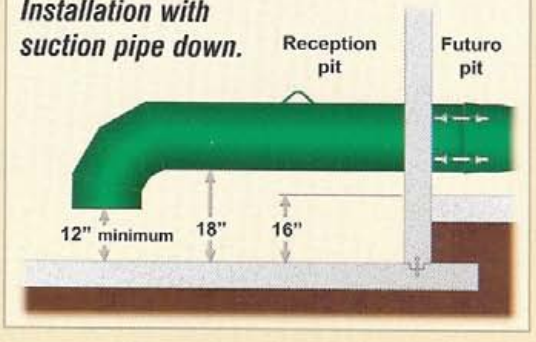
uation cycle, the
s the intake flapper and
g loaded discharge
end of the evacuation
g closes the discharge



Installation with suction pipe up.



Installation with suction pipe down.

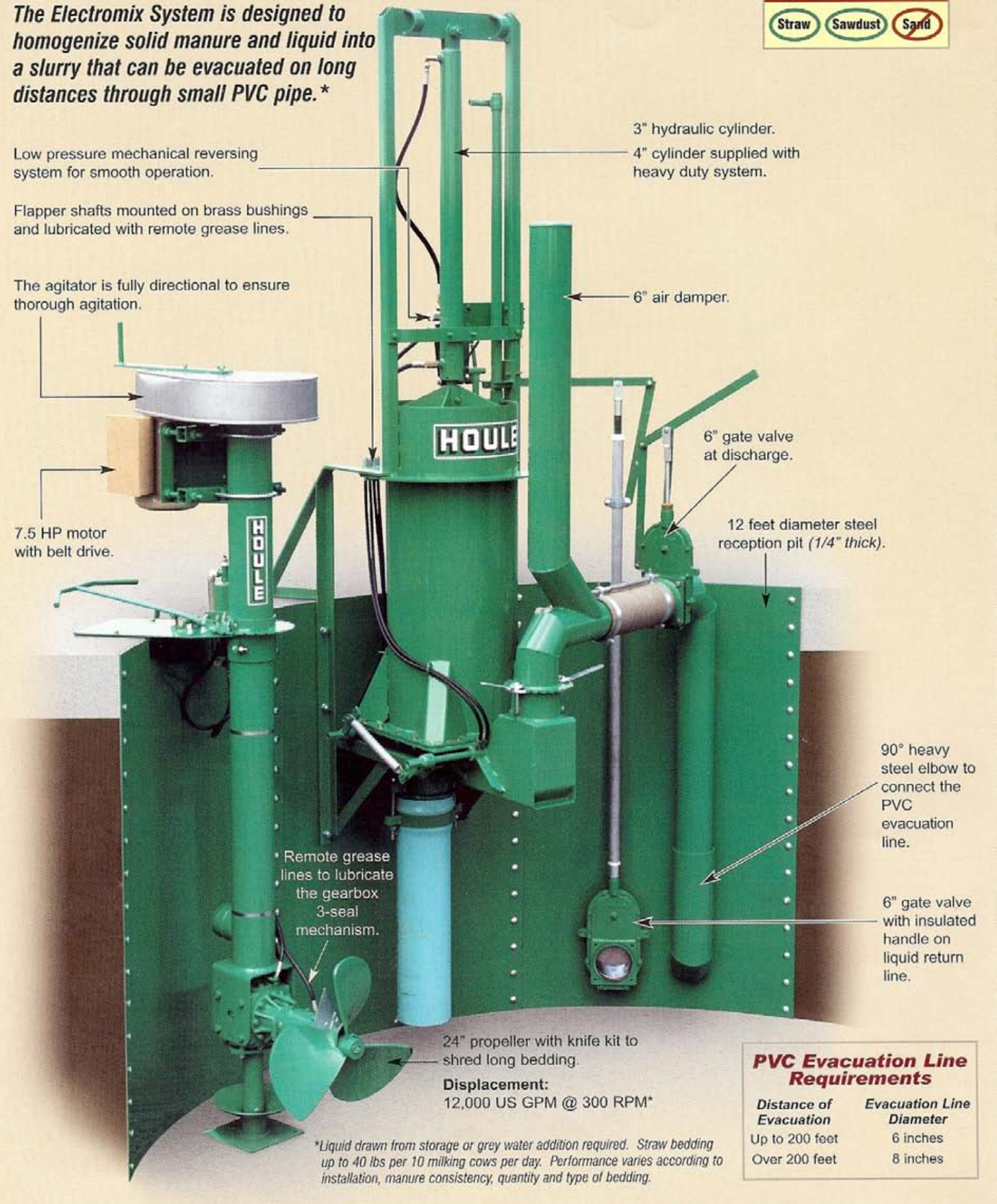


Electromix System

Tied Stall
Free Stall *

Straw | Sawdust | ~~Sand~~

The Electromix System is designed to homogenize solid manure and liquid into a slurry that can be evacuated on long distances through small PVC pipe.*

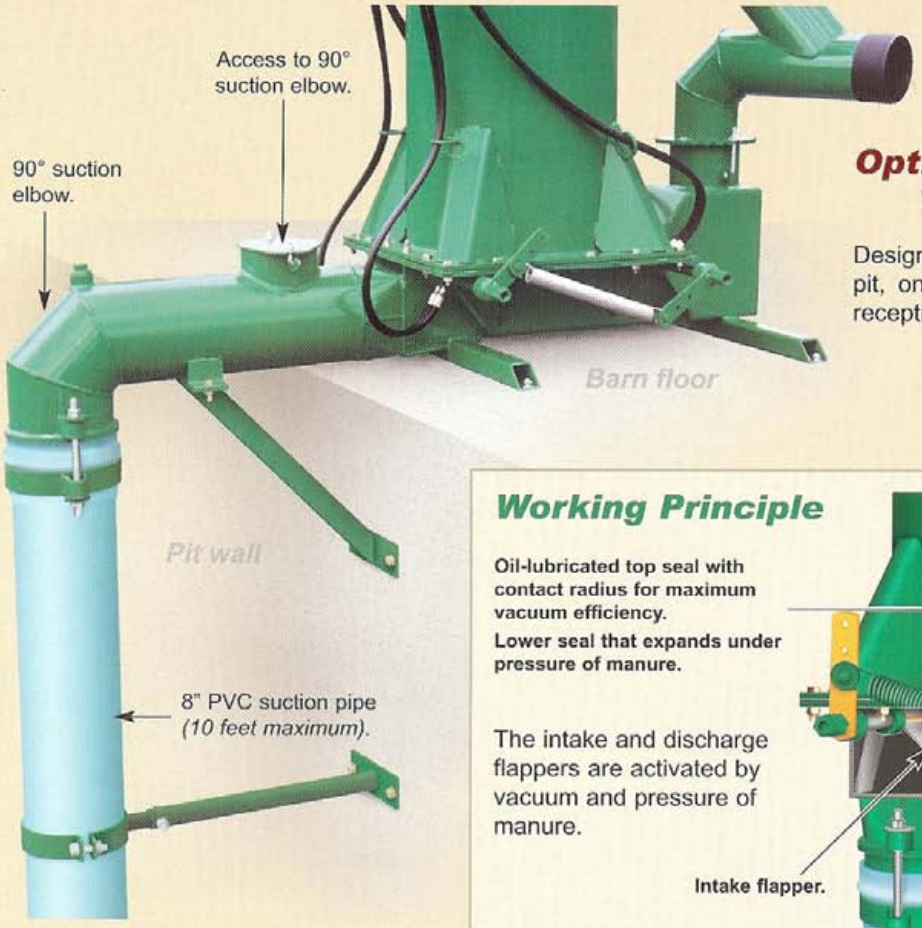


Displacement:
12,000 US GPM @ 300 RPM*

*Liquid drawn from storage or grey water addition required. Straw bedding up to 40 lbs per 10 milking cows per day. Performance varies according to installation, manure consistency, quantity and type of bedding.

PVC Evacuation Line Requirements

Distance of Evacuation	Evacuation Line Diameter
Up to 200 feet	6 inches
Over 200 feet	8 inches



Optional Floor Mount Base with 90° Suction Elbow

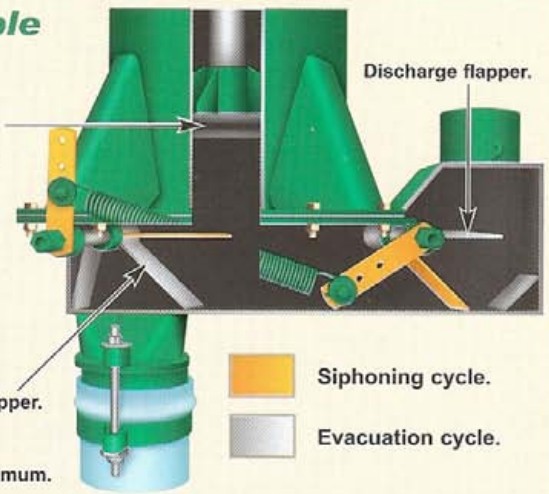
Designed for installation beside the reception pit, on the barn floor, or in a recess when reception pit is over 10 feet deep.

Working Principle

Oil-lubricated top seal with contact radius for maximum vacuum efficiency.

Lower seal that expands under pressure of manure.

The intake and discharge flappers are activated by vacuum and pressure of manure.

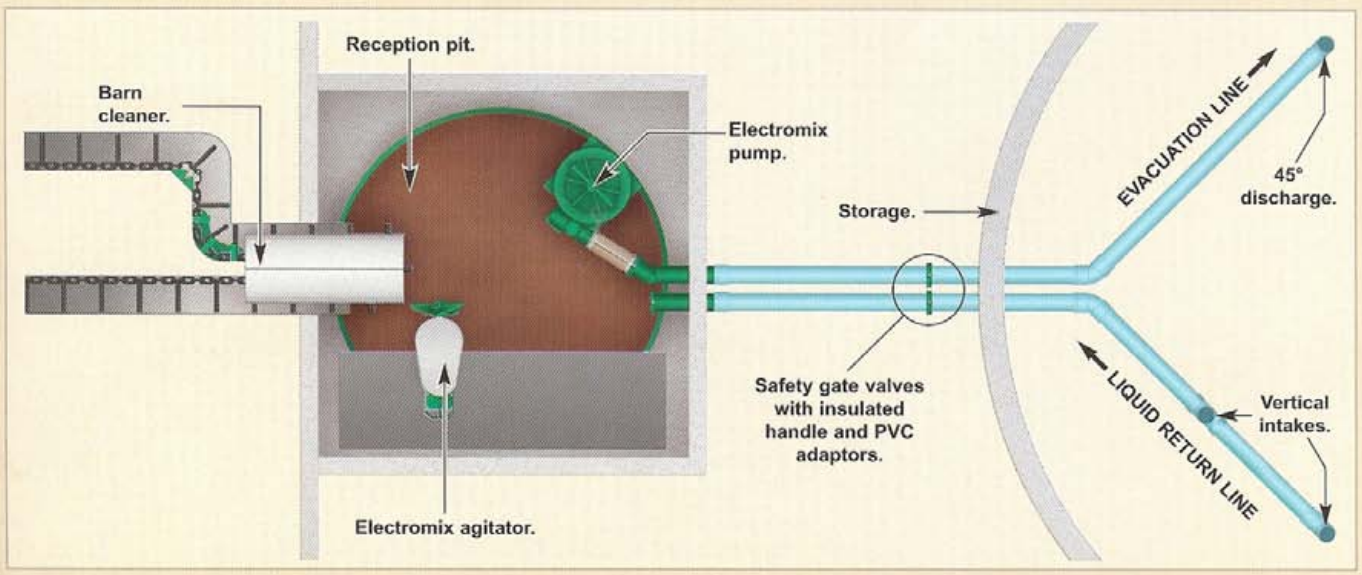


Depth of suction = 10 feet maximum.

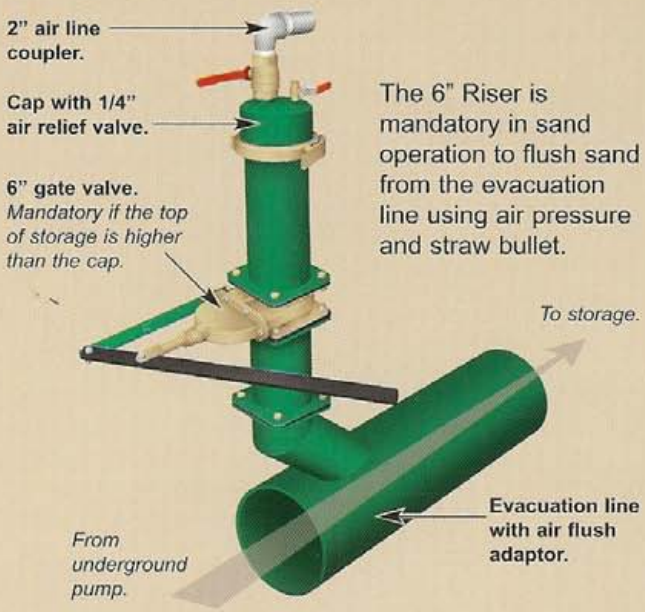
Liquid Return Line

The liquid return line allows the drainage of liquid available from storage to the reception pit in order to minimize water addition, thus reducing the volume of storage.

Usually, the grey water (approximately 6 US gallons per cow per day) is sufficient to condition the manure when draining liquid back from storage. In some cases, with a proper quantity of grey water or urine, there is no need for the liquid return line.



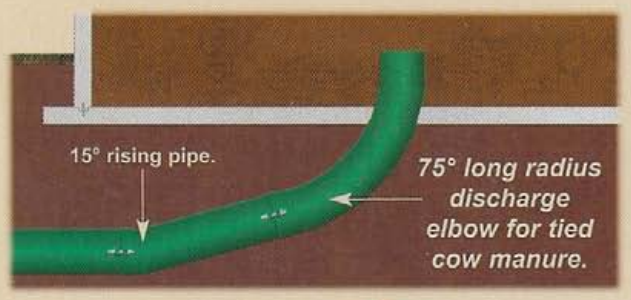
6" Riser for Air Flush



The 6" Riser is mandatory in sand operation to flush sand from the evacuation line using air pressure and straw bullet.

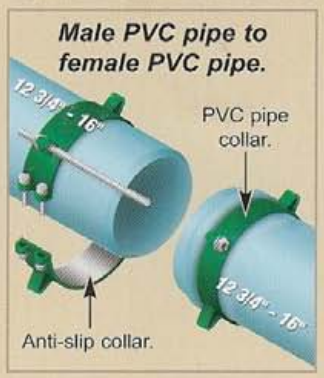
Available for 6 5/8", 8 5/8", 12 3/4" and 16" evacuation line.

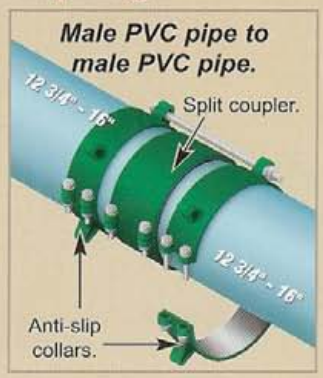
Evacuation Line Discharge

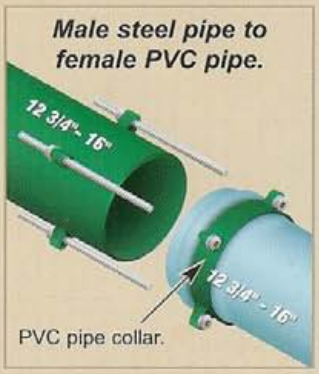


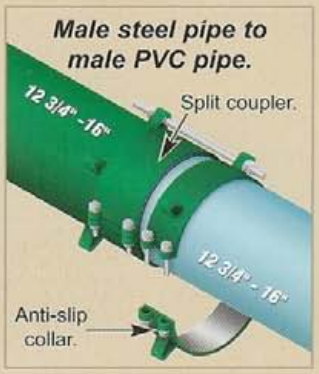
Flapper valve for slurry.

Evacuation Line Coupling









Steel equipment buried in corrosive soil must be protected with sacrificial anodes.

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