



ENGINEERED TOUGH

## BIO SPREADER 14 BIO SPREADER 20

M28  
M34

# MANURE SPREADERS

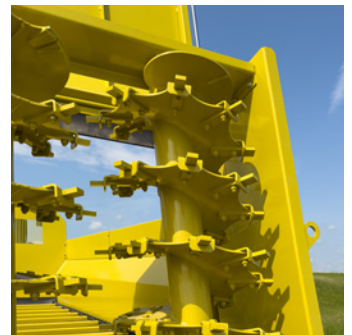


## ENGINEERED FOR ANY SIZE OPERATION

The Bio Spreader 14 and 20 models bring heavy duty to the next level. Built with hardened steel to prevent sagging and deformation over extended use. The live floor has a 3/4" grade 80 chain with a higher breaking strength, and the innovative vertical beater system delivers rock-steady performance, and uniform spread.

### Key Features

- Can achieve up to 50 ft wide and 100 ft long spread pattern.
- Live floor gives the option to unload all of its material in as little as 90 seconds.
- Longer hitch allows for a tighter turning radius for better maneuverability in tight spaces.
- Thicker abrasion-resistant teeth are significantly harder than regular steel so they last longer and can be easily replaced. Unique double-shear tooth retainer (patent pending).



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# STEADY AS SHE GOES

Many features on the Bio Spreader line of Manure Spreaders are a direct result of customer input: lower sides for easier loading, longer hitch for a tighter turning radius, and engineered to be towed by a smaller tractor or truck, to name a few. The biggest advances are tough, thick gauge steel construction, more reinforcement, and shock absorption for key areas like beaters and gearboxes. The beater system easily detaches so you can use the wagon on its own. It can now be used in other applications such as hauling manure to the field, snow hauling and moving other organic materials. The Bio Spreader easily manages bales so you can use it to quickly spread bedding. Prototype field testing by a wide range of livestock and poultry producers, with wet and dry manure, and in extreme weather conditions, means that the Bio Spreader is setting the new gold standard in manure spreading.

## Side Extensions

The Bio Spreader has an all heavy-duty design, can be simultaneously loaded by a Track Hoe and Skid Steer, and has patented reversible/replaceable teeth, a tighter turning radius for best maneuverability, and a uniform and consistent spreading pattern.



# INNOVATIVE VERTICAL BEATER SYSTEM DELIVERS ROCK-STEADY PERFORMANCE, UNIFORM SPREAD, AND EASY CLEAN UP.

## Detachable Versatility

Easily removable beater assembly allows you to use the trailer for hauling any organic material. It's as simple as removing 8 bolts, disconnecting the PTO shaft, and lifting off the backend.

## Heavy Duty Everything

Heavier gauge steel and robust construction for more durable, trouble-free performance.

## Tougher, Reversible/ Replaceable Teeth

Thicker abrasion resistant teeth are significantly harder than regular steel so they last longer and can be easily replaced.

## Reinforced Beaters

A double shear spike retainer plate ensures teeth won't break off.

## Versatile

Can also be used as a silage wagon and bedding spreader.

## Optional Paddles Available

For use when trying to achieve a very fine spread pattern.

## Handle Anything 3-in-1 Gearbox

The 3-in-1 Gearbox handles impacts from solid objects and materials.



## SPECIFICATIONS

Model	Bio Spreader 14	Bio Spreader 20
Overall Length	325 in.	355 in.
Overall Height	119 in.	122 in.
Overall Width	127 in.	128 in.
Overall Inside Width	72.5 in.	72.5 in.
Hitch Height	19 in.	19 in.
Tire Capacity	550/45/22.5 (9,350 lbs each)	550/60/22.5 (13,200 lbs each)
Loading Height (w/o extension)	76 in.	79 in.
Loading Height (w/ extension)	86 in.	93 in.
Box Inside Length	197 in.	227 in.
Box Inside Height (w/o extension)	31 in.	31 in.
Box Inside Height (w/ extension)	41 in.	45 in.
Unit Weight	14,500 lbs.	15,500 lbs.
Maximum Net Load	28,000 lbs.	41,600 lbs.
Capacity Extensions		
Struck Level	320 cu ft.	415 cu ft.
Heaped	440 cu ft.	555 cu ft.
Maximum	540 cu ft.	672 cu ft.
Construction		
Floor and Sides	Steel 3/16 in.	Steel 3/16 in.
Each Axle Spindle Capacity	20,000 lbs.*	20,000 lbs.*
Hydraulic Lift End Gate	Standard	Standard
Tongue Weight -% of Gross Weight	12%	12%

\*Axle Spindle Capacity Exceeds Tire Capacity

Model	Bio Spreader 14	Bio Spreader 20
Beaters		
Replaceable Paddles or Teeth	32	32
Diameter (lower paddle)	35	35
Diameter Paddle Flighting 3/8" Hardened Steel	26.5	26.5
Diameter (Spike Teeth) 3/4" Hardened Steel	32.6	32.6
Overload Protection Horizontal Beaters	PTO Shear Bold - Beater Urethane Coupler	PTO Shear Bold - Beater Urethane Coupler
Easily Removable Beater Assembly	Yes	Yes
Beater PTO Drive		
RPM	1000	1000
Gearbox Ratio	43.6:1	43.6:1
No. of Gearboxes	2	3
Chain Size	3/4 in. Grade 80	3/4 in. Grade 80
Chain Speed (Maximum RPM) 20 GPM	10	10
Gearbox Drive		
	Single Hydraulic Motor 200 cc with Pressure Relief Forward & Reverse	Dual Hydraulic Motors 80 cc with Pressure Relief Forward & Reverse
Standard Spreader Hitch	CAT 4 2" Articulating Insert with Reducer to Accommodate 1.5" Pin	CAT 4 2" Articulating Insert with Reducer to Accommodate 1.5" Pin
Horsepower Requirement	150 HP Minimum	200 HP Minimum

Bio Spreader 14: Cat 2 Hitch with No Extensions, Cat 3 Hitch with Extensions  
 Bio Spreader 20: Min Cat 3 Hitch, Heavy Loads Cat 4 Hitch

# M SERIES

The M SERIES Manure Spreader design is unmistakably Degelman. The most rugged, toughest built machines available.

From the ground up, these spreaders have been designed with rocks in mind, from its proprietary retractable free-swing flails, super duty gearbox, smooth sidewalls and heavy-duty frame to its clean gate opening.



## Rock Bypass System

Up until now, all spreaders in the world employ beaters made from some variation of a helical or auger shape. This inherently rigid design is always vulnerable to rock damage and high maintenance costs. The Degelman ROCK BYPASS SYSTEM (RBS), the heart of the M series, is nothing short of revolutionary. Five rows of free-swing flails, not only collapse upon stone impact, but will exceed expectations for throw distance, durability and even distribution pattern.

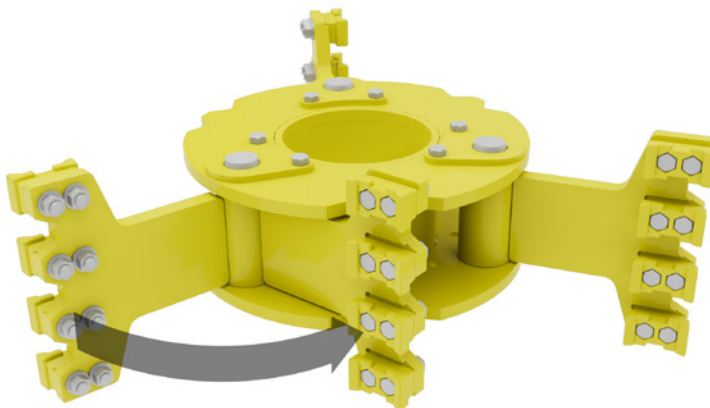
Degelman manure spreaders cut and tear material, drop heavier crumbled material to the next lower set of paddles for final processing and discharges material over 60 feet.



## Hammerhead Paddle Technology

How do you build the best manure spreader in the world? Start with Degelman, renowned for building legendary equipment for the past 50 years. The design is unmistakably Degelman. After five years of design, development, and intensive testing, Degelman introduces the most rugged spreaders available - the Degelman M Series.

From the ground up, these machines have been designed with rocks in mind, from its proprietary retractable free-swing flails, super duty gearbox, smooth sidewalls, and heavy-duty frame - to its clean gate opening.





## Superior Distribution Pattern

Distribution and throw distance is unrivaled with Degelman. Fine pulverized material is spread over 60 feet with secondary field passes normally not required. Hydraulic Push Off systems, however, compress manure as it is unloaded. This compression rate changes as less material is available for offloading resulting in inconsistent field distribution patterns.

Commercial operators have long known that a good chain floor drag system will spread material more evenly and is more reliable. These machines pull the material to the beaters with dual  $\frac{3}{4}$ " pre-stretched 100,000+ lb breaking strength marine grade drag chain and the Degelman RBS takes care of the rest.

## Hard Chrome Plated Pin

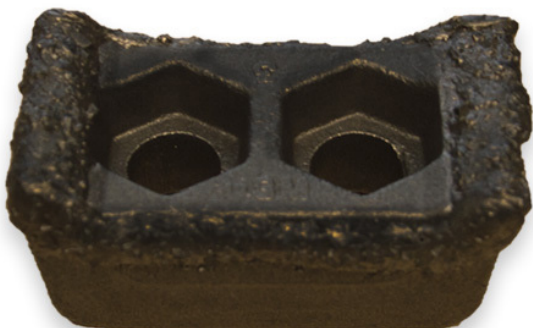
Simply the best corrosion resistance available in a hard chrome plated bar. Stelmi chrome plated bars can be produced with an increasing range of cost effective corrosion resistance (neutral salt spray testing to a 9 minimum rating).

Our superior corrosion resistance stems purely from the plating process; Stelmi uses no "waxes" or other coatings that can be used to temporarily enhance corrosion resistance.



## Forged Tip

USM scientifically developed forged tips are especially compounded from the best wear resistant steel and then heat treated to our specifications. Long wearing tungsten carbide infused hard faced welds are then applied by machine for a uniform placement to specific areas.



## Our Premium Double-Lip Seal

Press-fit installation prevents O.D. contamination while the additional sealing lip works in conjunction with Parker rod seals to provide redundant sealing for leakage reduction.

## Polygon Composite Bushing

Polygon bearings offer long lasting durability. During extensive testing, both in the laboratory and out in the field, Polygon composite bearings have routinely outperformed metal-backed and metallic bearings, while costing substantially less. Because Polygon composite components are inherently noncorrosive, they keep equipment operating efficiently under even the harshest weather conditions.

## Optional DIGI STAR Scales

The NT560 Indicator offers record keeping for nutrient land application.

The NT 8000i is a closed-loop rate control system for hydraulically driven, apron floor systems on manure spreaders – providing precision guidance and prescription-based control of spreading rate.



## Optional Four Piston Caliper Brakes

The A, M, H, SCL2 series brake calipers are hydraulically applied; four piston brakes are designed for a variety of dynamic braking requirements. Carlisle premium linings, and flexible mounting alternatives to fit wide range of machinery. Open caliper provides easy access for service.



## Walking Beam Suspension

Secondly, Degelman manure spreaders incorporate a straight forward and time tested walking beam floating suspension system. Tandem walking wheels cut uneven terrain in half with a massive unrestricted range of motion. All four wheels are always in contact with the ground surface. Coupled with a wide stance, these machines will ride over the roughest terrain with ease and control.





## Replaceable Paddles

The paddle cores start with a 1/2" heavy wall mechanical ten inch tube. Impeller paddles are simple and straightforward, produced from 1" Abrasion Resistant 400 material - about eight times more durable than regular mild steel. The paddles are interchangeable, reversible and can be easily replaced by removing a single over sized 1-3/4" stress proof pin - without cutting or welding.



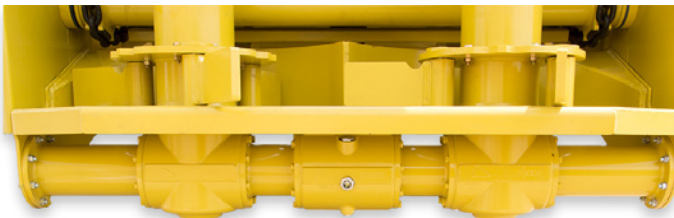
## Hydraulic Dosage Gate

The Degelman M Series dosage gate is hydraulically operated to control the flow of material. The inside frame or window is designed to be smooth and clear of potential obstructions for maximum output.



## World's Most Rugged Gearbox

The gearboxes that support the beaters are the largest commercial boxes available. From the inside out, these boxes are overbuilt. The nearly three-inch diameter heat-treated spline shafts are massive. Oil bathed heat-treated gear sets and roller bearings are in some cases twice the size of anything out there. These boxes are designed for years of maintenance free commercial use. The input drivelines also include runaway clutches for further rock protection.



## SPECIFICATIONS

Model	M28	M34
Spread Width	60'-80'	60'-80'
Unloading Time	90 sec	100 sec
Horsepower (ideal)	180+ hp	225+ hp
Dry Weight	21,600 lbs	23,000 lbs
Hitch Weight	620 lbs	875 lbs
Capacity	28 t (2,000 lbs/yd³)	34 t (2,000 lbs/yd³)
	28 yd³	34 yd³
	21 m³	26 m³
	756 ft³	918 ft³
Inside Length	19'	23'
Inside Width	6'-6"	6'6"
Hydraulic Pressure (min)	2,700 psi	
Hydraulic Flow (min)	25 gpm	
PTO	1000 rpm, 1-3/4" - 20 Spline	
Tires (standard)	Alliance 650/55R26.5	
Tires (optional)	Muckmaster 750/60R26	
Flails	Max Life Replaceable Carbide Tip	