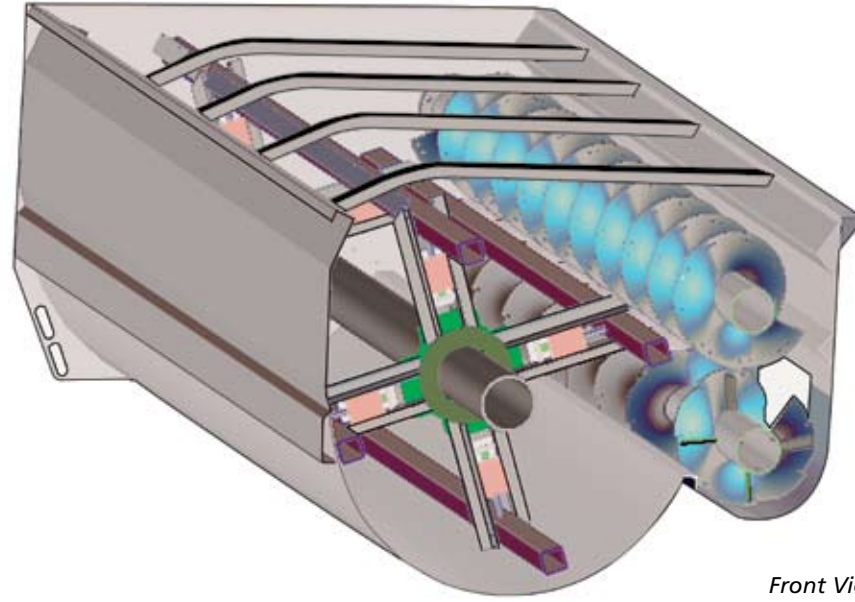


Innovative Reel and Auger Design

GET THE COMMERCIAL REEL ADVANTAGE

- Fluffy, more palatable ration
- Faster, more thorough mix
- Less pressure means less HP required, less machine wear, less feed breakdown
- Effective hay-handling capability
- Dependable performance



Front View

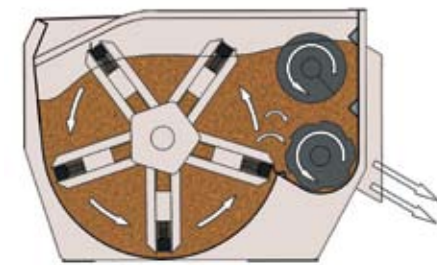
THE REEL MIXING DESIGN

The Commercial Reel Mixer blends by gently lifting and tumbling all feed ingredients. This produces a fluffy, more palatable ration that ensures increased consumption and better herd health.

The gentle tumbling action of the large-diameter reel works together with the two side blending augers to produce an end-to-end and side-to-side mixing action. This unique combination ensures faster mixing and unloading times and a very thorough mix, even when mixing small batches. The reel design eliminates much of the force and pressure inherent to most other mixer designs. This results in lower horsepower requirements, reduced machine wear and less feed breakdown.

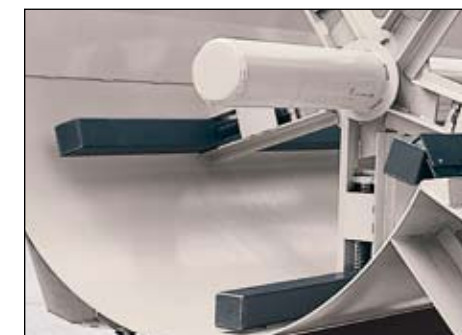
The design of the knife-equipped, upper and lower augers, working with the side and lower shear angles, provides the Commercial Reel with a more effective hay-handling capability for beef and dairy rations.

This mixer is designed for operators who need dependable performance. Superior mix quality, dependability and long life promote higher feed intake and production, fewer equipment problems and lower overall ownership costs.



REEL FEED MOVEMENT

- The large reel turns slowly, gently lifting material up into the two side blending augers.
- The upper auger moves material rearward, while the lower auger moves material forward and serves as the discharge auger.



REEL CROSSBARS & WIPERS

- Poly wipers assist the reel and augers in mixing even the finest ingredients and ensure complete cleanout.
- Adjustable spring-loaded crossbars relieve excessive pressure.



UPPER AUGER

- The higher-speed upper auger assists mixing by moving material rearward.
- The aggressive, hardened-edge knives help process hay to the proper length and are reversible and replaceable.



LOWER ROUGHAGE AUGER

- The lower auger mixes by moving material forward and provides a fast, steady feed flow to the discharge.
- Notched sectional flighting has weld-in, hardened knives that are self-sharpening for longer life.

Mixes the Most Consistent Rations

GET THE COMMERCIAL REEL MIX QUALITY ADVANTAGE

- Consistent feed quality
- Less feed damage
- Higher consumption
- Less separation and waste
- Better rumen health



UNMATCHED MIX QUALITY YIELDS RESULTS

Kuhn Knight offers three different mixer designs to cover virtually every customer need or application. The strength of the Commercial Reel is its ability to provide superior mix quality. The combination of the reel and augers provides a superior end-to-end and side-to-side mixing action. The result is the most consistent mix quality available, providing a balanced ration in every bite your cows eat.

The gentle tumbling action of the reel mixes fragile alfalfa hay without causing excessive leaf damage. Less feed damage and more leaf in the mix means more protein for your animals. This gentle handling of feed reduces fines and produces a more palatable ration. A high quality ration means higher feed consumption, which results in higher production for your operation.

Even the most balanced ration is effective only if the animal eats all the feed. The consistent mix quality from the Commercial Reel allows less feed separation and waste. This balanced ration provides the nutrients needed for higher production and better rumen health.



SCALES

- Kuhn Knight offers several different indicators that range from simple weigh-up and weigh-down models, to indicators that have programming capability.
- Kuhn Knight also offers indicators that interface with feed management software to track and control your feeding program.

DIFFERENT MODELS AND OPTIONS TO MEET YOUR SPECIFIC NEEDS



TRAILER

- The trailer model is the most popular unit sold. It is available with slide-tray or 4-auger discharge options to handle most feeding applications.
- The high discharge design allows the simple slide-tray discharge to feed into most bunks.



TRUCK

- Truck-mounted mixers are ideal for faster, more convenient travel between farm locations.
- Other benefits include operator comfort and increased maneuverability, especially when backing up in freestall barns or long bunk runs.



STATIONARY

- Feed mills often use Commercial mixers, which are the machines of choice for efficient, consistent, and accurate mixing.
- Certain operations require stationary units. Upright silo storage and automated feeding systems lend themselves to central mixing.

Even Better with the ROUGHAGE MAXX System

GET THE ROUGHAGE MAXX ADVANTAGE

- Improved ration quality
- More consistent hay particle length
- Ration flexibility
- More uniform TMR
- Increased feed palatability
- Reduced feed sorting



EFFECTIVE HAY HANDLING

The Roughage Maxx system was designed for rations with a higher hay content and improves ration quality by processing hay to a more uniform length. Now a more consistent hay particle length can be achieved when adding small and large square bales, broken-up round bales or other long-stemmed forages into the ration.

The Roughage Maxx system consists of the lower roughage auger with a scalloped knife option that maximizes efficient hay processing when incorporating up to 20 percent good quality hay. There is flexibility to add, remove or omit Roughage Maxx scalloped knives to specifically meet your ration needs.

As a result, hay is processed to a more uniform length and evenly blended throughout the ration. This provides a more uniform TMR mix, increased feed palatability and reduced feed sorting for better feed efficiency on your operation.



HAY MAXX SYSTEM

- The Roughage Maxx system works best with the patented Hay Maxx system and will help provide a more uniform ration.
- The Hay Maxx System allows the hay to be preprocessed in the upper auger before entering the mixing chamber.

THE HAY MAXX SYSTEM HELPS PROCESS A WIDE VARIETY OF MATERIALS



PROCESSING

- The Hay Maxx System can handle 300-400 lbs. of dry hay on the pan at one time.
- It helps process small and large bales, broken-up round bales, frozen bunker silage, and other bulky materials without over-processing the ration.



FIXED OR HYDRAULIC

- The Hay Maxx System can be installed either in a fixed position or with an optional hydraulic cylinder.
- The backstop and vertical bars on the haypan help prevent excessive rearward material movement.



HEIGHT CLEARANCE

- The optional hydraulic cylinder raises and lowers the haypan for height clearance purposes. This option can be field installed at any time.
- The pan folds flat over the augers in the lowered position, which allows loading on the reel side of the machine.

Loaded with Features and Built to Last!



1 BOX CONSTRUCTION

Sturdy end panels combined with heavy-duty reel and auger hoppers provide the heaviest standard mixer box in its class.

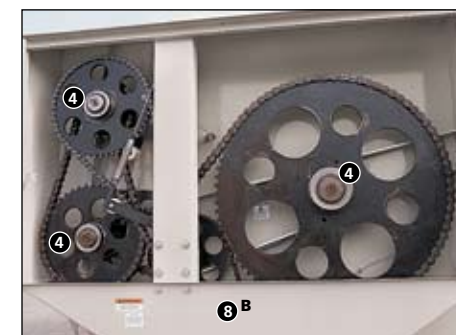
The upper and lower shear angles strengthen the mixer box, improve end-to-end mixing, and increase hay processing efficiency.

The large door opening allows for fast and even discharge.

2 OIL BATH DOOR ^B

Gas-charged lift cylinders provide simple and convenient access to chains, sprockets and tighteners.

The oil bath door seals against the protruding edge of the oil bath for a reliable seal.



5 REAR OIL BATH ^{A,B}

- The dependable, heavy-duty roller chain drive runs in oil and has spring-loaded, self-aligning poly tighteners for long life.
- Final drive shafts and sprockets are splined for strength and serviceability.

3 OPTIONAL SLIDE TRAY OR HYDRAULIC AUGER DISCHARGE

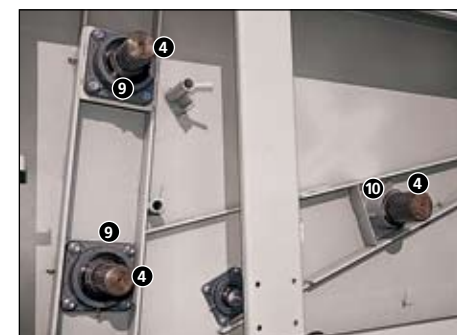
The high discharge design with simple hydraulic-control slide tray will handle most feeding applications.

The 4-auger discharge has adjustable height for feeding into high bunks. A simple drive and replaceable poly chute liners will provide years of service.

Magnets are standard to help prevent "hardware disease".

4 EXCLUSIVE FRICTION-WELDED SPLINED SHAFTS

This state-of-the-art process on reel and auger drive shafts provides superior strength and dependability over conventionally welded and keyed shafts.



9 AUGER BEARINGS ^B

- Self-aligning bearings are mounted on the outside of the mixing chamber for easy service and extra life.
- Polyethylene seals help prevent bearing contamination.



5 HEAVY-DUTY UNDERCARRIAGE ^A

The rectangular tube frame construction with steel bumper provides strength, reliability, and added unit protection.

Large-diameter spindles provide optimum strength and durability.

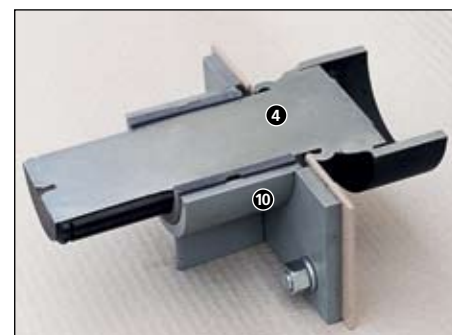
The adjustable and reversible clevis hitch adapts to different drawbar heights.

6 TANDEM-AXLE TRAILER

This feature allows for better flotation. It is optional on models 3160/3170, and standard on the 3195 model.

7 SCALE EXTENSION ARM

The sturdy, adjustable, telescoping swing arm permits indicator viewing from either side of the mixer.

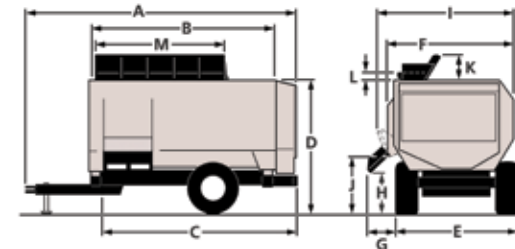


10 REEL BEARINGS

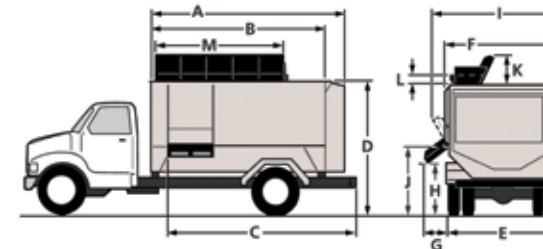
- Nylon bearings, with polyethylene seals, provide simplicity, long-life, and help prevent oil bath contamination.

MODEL SPECIFICATIONS

For truck chassis information on mounting Commercial Reel mixers, or for stationary specifications, call or see your dealer or visit our Web site at www.kuhnknight.com



TRAILER-TR



TRUCK-TK

MODEL	3150		3160		3170		3195	
DIMENSIONS (INCHES)	TR	TK	TR	TK	TR	TK	TR	TK
A - Overall Length	240	187	270	217	300	247	292	245
B - Mixing Chamber Length	168	168	198	198	228	228	216	216
C - Front Discharge to Bumper	177	175	207	205	237	235	226	227
D - Overall Height ^{1,2}	107	117	107	117	107	117	126	132
E - Tread Width ²	101	96	101	96	101	96	110	96
F - Overall Width (mixer only)	102	102	102	102	102	102	120	120
G - Slide Tray - max. reach	22	22	22	22	22	22	30	30
H - Slide Tray - max. height	32 / 42	NA	32 / 42	NA	32 / 42	NA	NA	NA
I - Slide Tray - transport width	35	45	35	45	35	45	50	56
J - Hinge Height for Discharge	50 / 56	NA	50 / 56	NA	50 / 56	NA	NA	NA
K - Height - Haypan Up	114	114	114	114	114	114	128	128
L - Height - Haypan Down	126 / 130	NA	126 / 130	NA	126 / 130	NA	NA	NA
M - Length - Haypan	47	57	47	57	47	57	56	62
	22	22	22	22	22	22	22	22
	8	8	8	8	8	8	8	8
	120	120	144	144	144	144	144	144
SPECIFICATIONS								
Unit Weight ³ - (TR / TK) pounds	14,618 / 12,703		16,190 / 14,749		20,580 / 18,399		27,550 / 21,554	
Maximum Net Load - pounds	15,000		18,000		21,000		28,500	
Mixing Capacity - cubic foot	500		600		700		950	
Reel Diameter	70"		70"		70"		84"	
Reel Drive Shaft Diameter	5"		5"		5"		8" tube	
Reel Arms	4		4		4		5	
Reel Hopper Thickness	3/8"		3/8"		3/8"		3/8"	
Reel Speed RPM	6.4		6.4		6.4		5.2	
Lower Auger								
Flighting Diameter	24"		24"		24"		28"	
Flighting Thickness ⁴ - Sectional	5/8"		5/8"		5/8"		3/8"	
Tube - Outside Diameter	6 5/8"		6 5/8"		8 5/8"		8 5/8"	
Drive Shaft Diameter	3 1/2"		3 1/2"		3 1/2"		5"	
Upper Auger								
Flight Diameter	22"		22"		24"		28"	
Flighting Thickness - Sectional	1/2"		1/2"		1/2"		1/2"	
Tube - Outside Diameter	6 5/8"		6 5/8"		8 5/8"		8 5/8"	
Drive Shaft Diameter	3 1/2"		3 1/2"		3 1/2"		4"	
Auger Hopper Thickness	3/8"		3/8"		3/8"		3/8"	
Side Sheets Thickness	3/16"		3/16"		3/16"		1/4"	
End Sheets Thickness	1/4"		1/4"		1/4"		1/4"	
Door Opening Size	42" x 22"		42" x 22"		42" x 22"		48" x 26"	
Roller Chain Drive	80-100-120-140		80-100-120-140		80-100-120-140		80-120-140-dbl 140	
Spindle Diameter - single axle / tandem axle	4 1/2" / NA		4 1/2" / 3 3/8"		4 1/2" / 3 3/8"		3 3/8"	
Hub	HD 10-bolt		HD 10-bolt		HD 10-bolt		HD 10-bolt	
Tongue Weight - % of gross weight	9%		11%		14%		11.5%	
Tractor Requirement - PTO ⁵	100		110		120		165	

¹ Truck dimensions based on 38" truck frame height.

² Heights and widths will vary depending on tire size.

³ Unit is equipped with most common options.

⁴ 1/2" flighting at convergence is standard.

⁵ Horsepower requirement may vary with different materials. Consult operator's manual for proper tractor sizing.

We reserve the right to change any equipment specifications, design, or materials without notice. These mixers are designed for agricultural use only with materials estimated up to 30 lbs. per cubic foot. Contact factory for non-agricultural use or heavier materials. Equipment shown in this literature may be protected by at least one patent and/or trademark.



SAFETY FIRST

Always read and understand the Operator's Manual and all Safety Details before using the equipment.

YOUR KUHN KNIGHT DEALER

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3100

Commercial Reel

TMR Mixers

500 - 950 Cubic Feet



WORLD-WIDE LEADER IN TMR MIXERS

^A See specification page for more information. ^B To better illustrate certain details of the machinery, some safety devices may have been removed. Do not operate without all shields in place.