

Vertical TMR Mixers | 1,400-1,960 Cubic Feet

# Vertical Maxx®

## VXL 100 Series



**Invest in Quality®**





VERTICAL MAXX® TMR MIXERS VXL 100 SERIES

# FEED MORE COWS PER LOAD

### CAPACITY

As farms increase in size, the mixing & feeding capacity requirements also increase. Triple-auger vertical mixers provide the ultimate solution for farmers to feed more cows per load, by increasing the capacity without compromising mixing quality.

### QUALITY MIXING

Vertical mixers have long been known for their ability to achieve a completely uniform mix. Consistent processing lengths optimize rumen function and productivity. Uniform mixing and consistent processing result in a quality mix that minimizes ingredient sorting and helps ensure that the animal is getting the nutrients that it needs to excel in production.

### RATION VERSATILITY

KUHN Knight vertical mixers offer the most versatility to process and mix the widest variety of feedstuffs. This includes round bales, square bales, baleage, forages, small grains, concentrates and other hard to handle materials.

### TIME TESTED

KUHN Knight mixers have withstood the test of time and will continue to do the same for you and your operation. Combining years of experience with the latest technologies, KUHN offers an exceptional line of TMR mixers.

## VERTICAL MAXX® VXL 100 SERIES TMR MIXERS in brief

Models	Mixing Capacity (w/ Extensions)	Available Configurations	Available Door Configurations
VXL 1140	1,400 (1,540) cu. ft.	Trailer or Stationary	Front, Side & Rear
VXL 1165	1,650 (1,815) cu. ft.	Trailer or Stationary	Front, Side & Rear
VXL 1180	1,800 (1,960) cu. ft.	Trailer or Stationary	Front, Side & Rear



# TAKING EFFICIENCY...TO THE MAXX

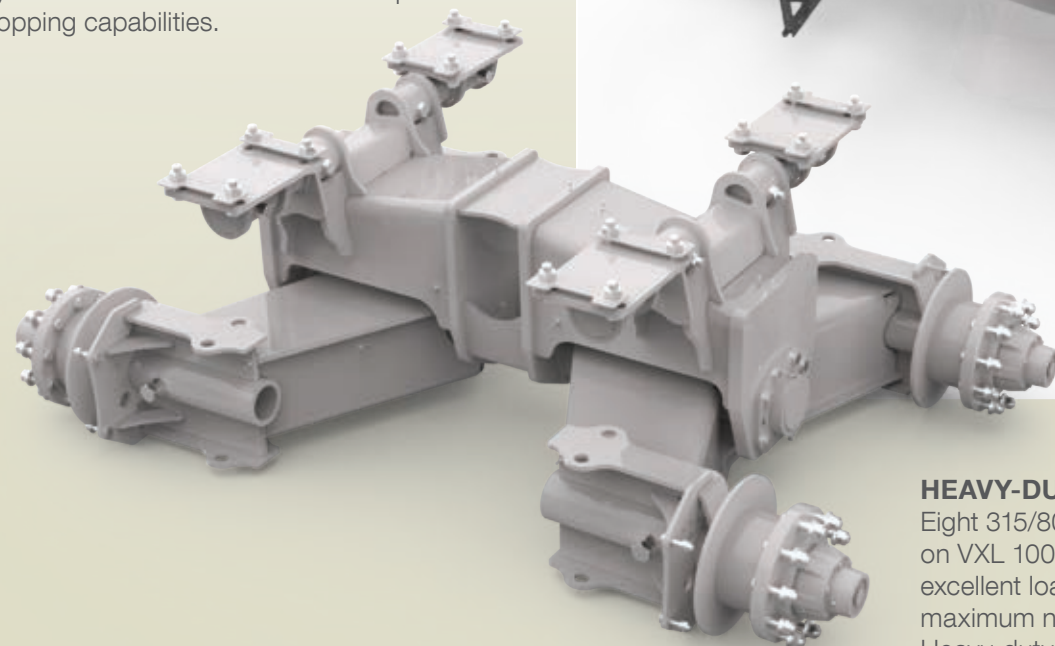
The new KUHN Knight VXL 100 Series triple-auger mixers are rugged, yet simple to operate machines designed for large dairies that are looking to maximize efficiencies and feed more cows per load. Built to last in commercial operations and easy to maintain, the VXL allows you to spend more time at the bunk and less time in the shop. Available in trailer and stationary configurations, the VXL 100 Series mixers range in capacity from 1,400 ft<sup>3</sup> to 1,960 ft<sup>3</sup>.

## TWO-PIECE BAFFLE DESIGN

A key component to aid in superior feed movement is a tall, steep baffle. The baffles help direct material flow within the mixer for the most efficient mix. The new, two-piece baffle design allows for more space on the sides for better horizontal feed movement and fast, thorough cleanout.

## RUGGED UNDERCARRIAGE

The undercarriage features a simple, yet rugged bogie axle that pivots on heavy-duty 5" pivot pins with sleeve bearings for excellent stability, longer life and no maintenance. The sleeve bearings are grease free, to minimize daily service points and save maintenance time for the operator. An adjustable, articulating hitch available with a 1.5" or 2" diameter pin, allows for ease of pulling and less drawbar wear. Hydraulic brakes are standard for improved stopping capabilities.



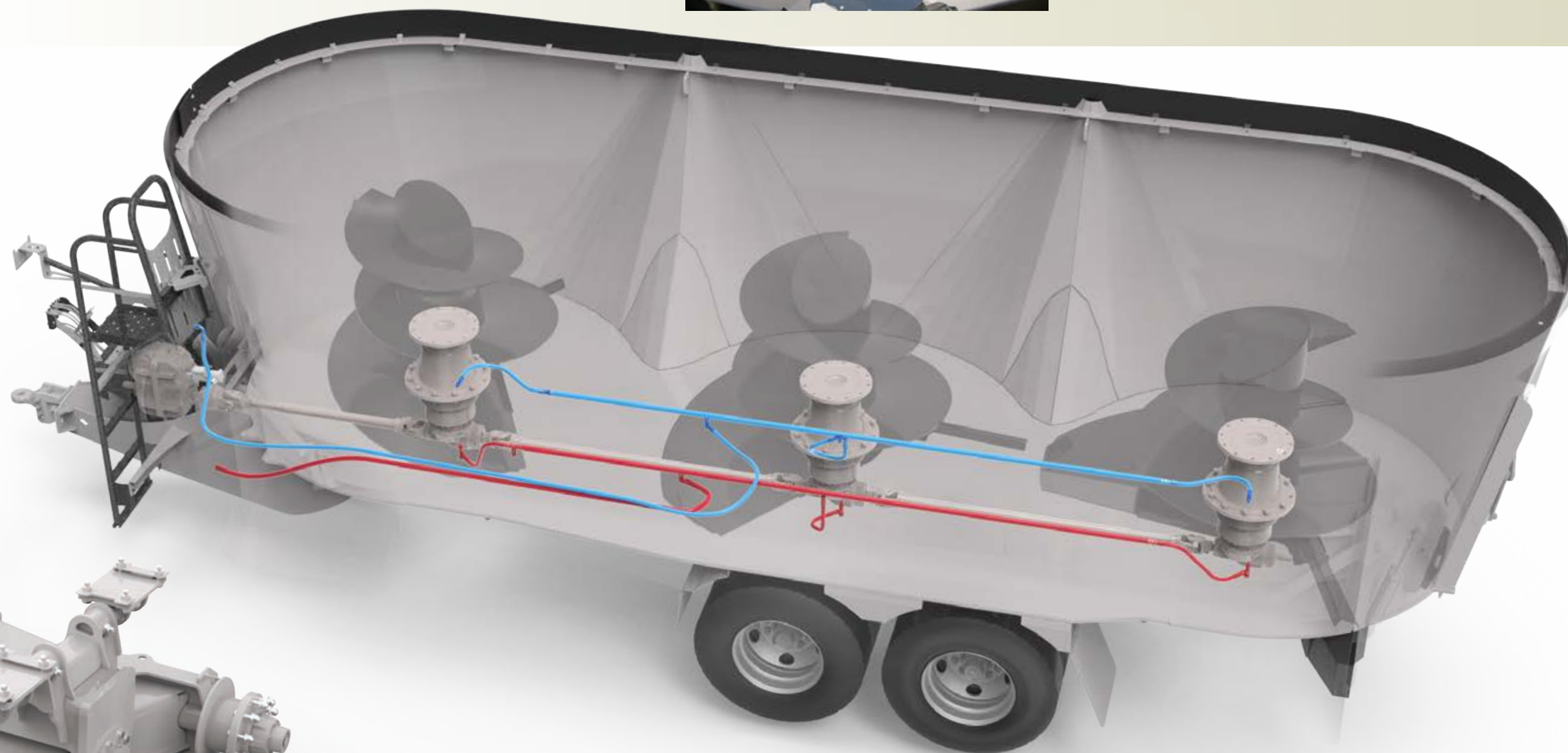
## HEAVY-DUTY TANDEM AXLES

Eight 315/80R 22.5 truck tires are standard on VXL 100 Series mixers. Truck tires offer excellent load carrying capabilities for maximum net loads up to 58,800 pounds. Heavy-duty tandem axles offer similar load carrying capabilities as a tridem axle, but with fewer moving parts and no steerable axle requirement. Each axle features oil-filled wheel hubs and no grease fittings on the undercarriage or bogies.



## HEAVY-DUTY UNIT SHELL

A heavy-duty unit shell, along with a 1" reinforced floor provides superior strength and durability for a long life. The steep side walls, in combination with a wide base and auger diameter of 104", allow for increased feed movement and promotes a fast and thorough mix.



## SIMPLE, INLINE DRIVE

The VXL uses a simple, yet heavy-duty inline drive design. Three, 2-stage planetary gearboxes are heavy-duty, reliable and designed for commercial use. The top bearing is fully flooded in oil, eliminating an extra greasing point. An automatically resetting torque disconnect clutch is standard equipment for torque protection of the gearboxes. The secondary drives have extended greasing intervals up to 40 hours, greatly reducing maintenance requirements.

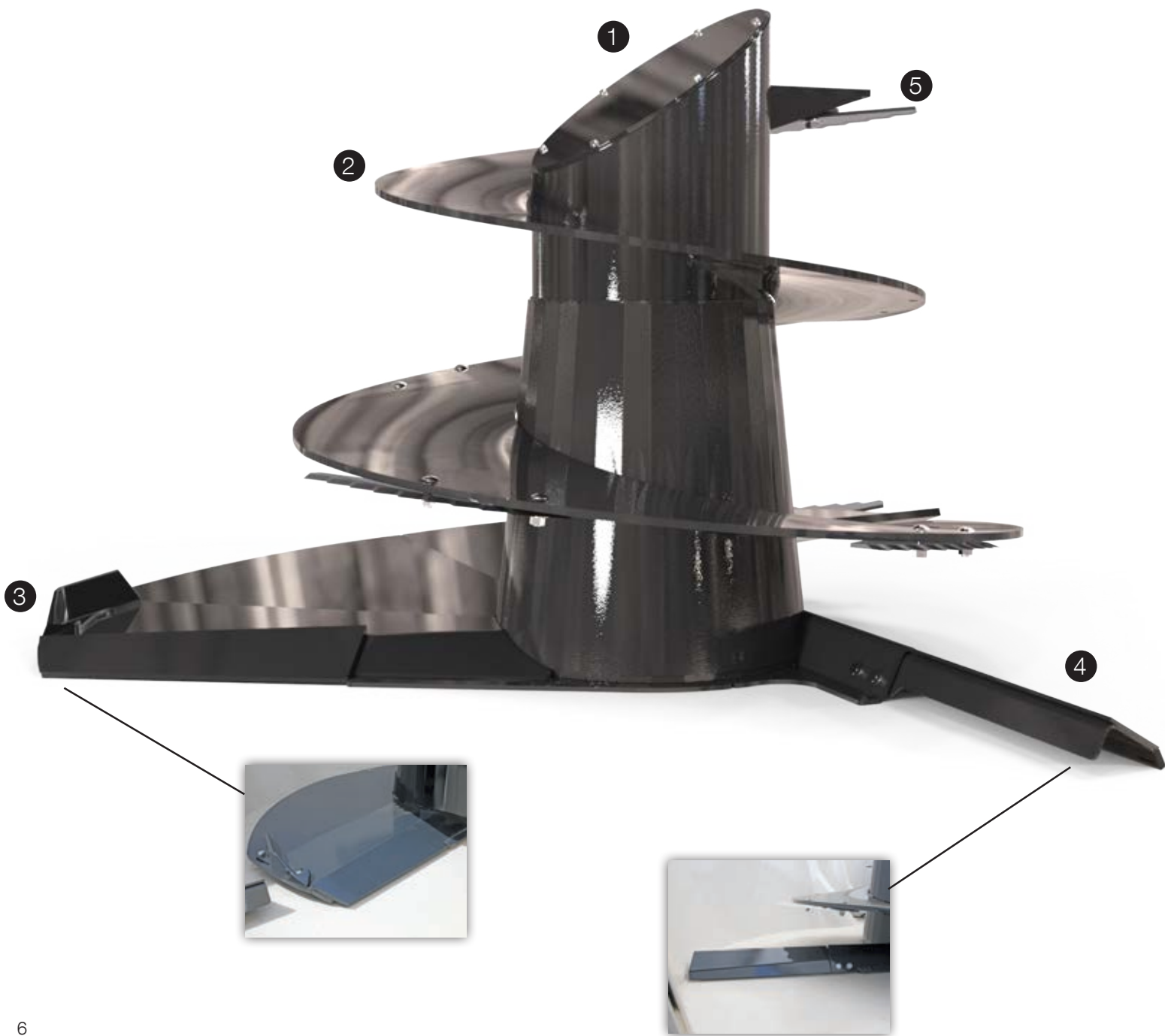
## OIL COOLING AND FILTRATION SYSTEMS

To best protect the planetaries and gearboxes through higher-duty cycles and greater mixer throughput, oil cooling and filtration systems are supplied as standard. These systems extend oil change intervals up to two times, leading to less time and money spent on oil changes, while also ensuring longer life of the components. Brushless variable speed fans automatically adjust speed to match cooling demand, saving energy and increasing fan life.

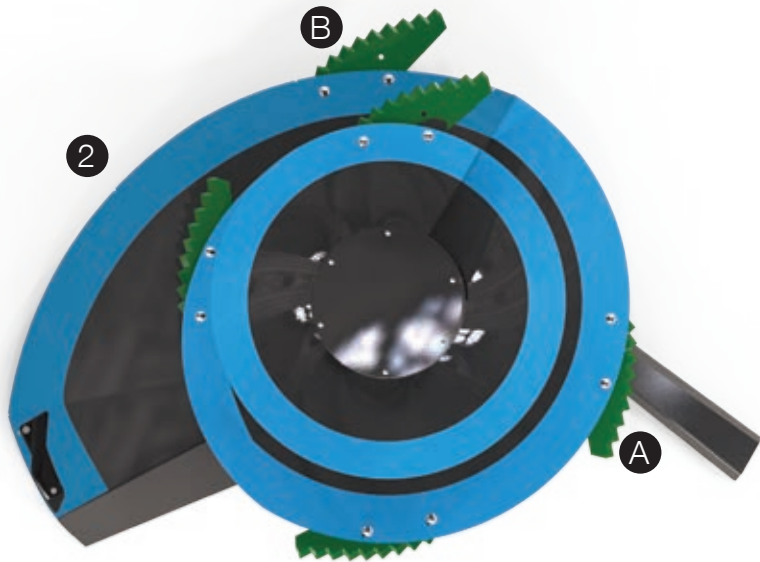


# FASTER, MORE COMPLETE MIXING STARTS WITH THE AUGER

New cone-style augers provide superior feed movement for faster, more complete mixing and processing. The smooth, continuous auger flighting creates a rolling feed action that improves mixing. The top cover of the auger has a steep angle to aid in bale movement when processing round bales and to prevent feed from sitting on top of the auger between mixes. The straight bolt-on kicker provides a fast and even discharge. Each lead flight is equipped with a cast iron scraper that pulls material away from the tub walls into the auger for a better overall mix. Both the kicker and scraper are bolt-on attachments, making replacement very easy to save you precious time.



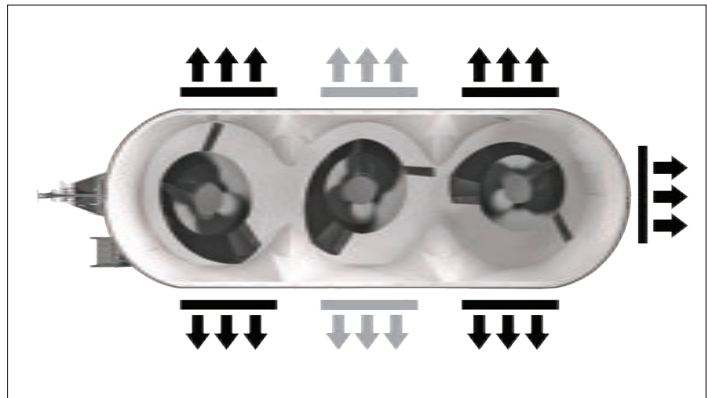
- 1 AUGER CONE**  
The new auger cone is designed for better auger cleanoff and made of higher-carbon material resulting in longer life. The angled top cover of the auger promotes consistent material flow and improves cleanoff. In addition, it provides an uneven surface of the upper tube to aid in bale movement when processing round bales.
- 2 CONTINUOUS FLIGHTING**  
Smooth, continuous flighting promotes a rolling action of the feed for more thorough mixing and lower horsepower requirements. The heavier lower flighting, along with the heat treatment on the outer 4" provides longer service life.
- 3 ADJUSTABLE, REPLACEABLE SCRAPER**  
The adjustable, replaceable lead-flighting scraper is angled to guide feed up the auger flighting for efficient movement. The scraper ensures all ingredients, even added in small amounts, are thoroughly mixed.
- 4 EFFICIENT DISCHARGE KICKER**  
The straight kicker design provides more feed movement during mixing and a more even discharge. The kicker is bolt-on, which allows it to be easily replaced when worn and is equipped with a wear plate in order to increase its strength and longevity.
- 5 HARDENED KNIVES**  
Large, 15" or 20", replaceable haycutting knives are available to best handle the material to be processed. The knives have two positions to adjust the aggressiveness of the knife angle. Versatility of knife length, angle and position allow for optimal setting with a wide variety of ration ingredients.
  - A** Knife set in for slicing and cutting
  - B** Knife set out for grabbing and tearing
- 6 ADJUSTABLE HAY STOPS**  
The adjustable hay stops provide flexibility in processing to provide the cut length necessary to reach the optimal nutritional value you're striving for. This adjustability makes hay processing more efficient and helps minimize overprocessing.





# TAILORED TO YOUR OPERATION

Various door configuration options on trailed and stationary models offer flexibility to fit a variety of feeding situations. The large discharge openings provide fast, even unloading from front, side and rear door locations for maximum efficiency.



## MULTIPLE DOOR OPTIONS

The VXL 100 Series trailed models offer a rear door standard with the option of a front door, two side doors on either side, or all four side doors for increased flexibility and versatility to fit your unique feeding situation. Door locations on stationary machines include: rear, two side doors, or three side doors on either side.

*Note: Middle doors available only on stationary models.*



## SIDE DOOR

Large side doors provide fast and efficient feeding, with very few components or moving parts. A simple fixed tray is incorporated directly into the door frame and includes two strong magnets, as standard, to help catch any hardware to protect the health of the herd. The rubber belting helps direct the flow of feed for more accurate feed placement.



## FRONT DOOR

Choose a front door for clear visibility of the material coming out of the door. The front discharge is equipped with a flat chain and slat conveyor that has bidirectional feeding capabilities. The flat front conveyor option is simple to operate and offers convenient feeding from either side of the machine on trailer models. The conveyor acts as an accumulator for a more consistent and even feed out. Hydraulic side shift is standard and gives you the ability to shift the conveyor a total of 16" from side to side for accurate feed placement.



## REAR DISCHARGE

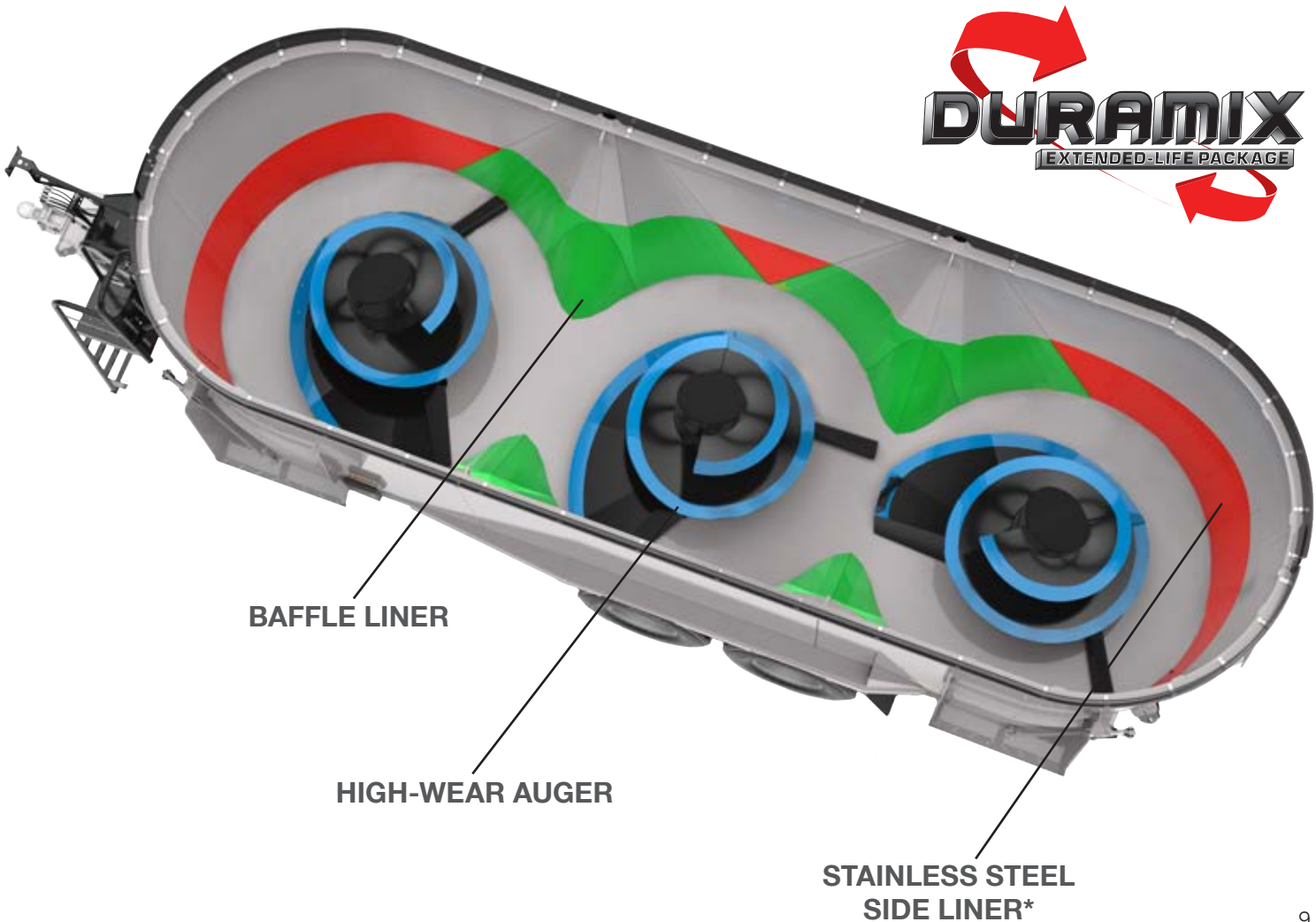
A rear commodity door is standard on trailed VXL mixers. The large opening provides fast discharge, even with high-roughage premixes.

# BUILT TO LAST!

DuraMix® extended wear components help ensure dependable service and long life, even under the heaviest-use cycles.

These include standard stainless steel side liners\*, higher-carbon steel on the baffles and high-wear augers for all KUH N Knight VXL mixer models. The higher-carbon augers, with heat treatment on the outer 4", doubles the life of the auger flighting while maintaining a smooth surface to optimize cleanoff. Tests have shown the high-wear augers last two times as long as compared to standard augers. For additional wear protection, optional baffle liners are also available.

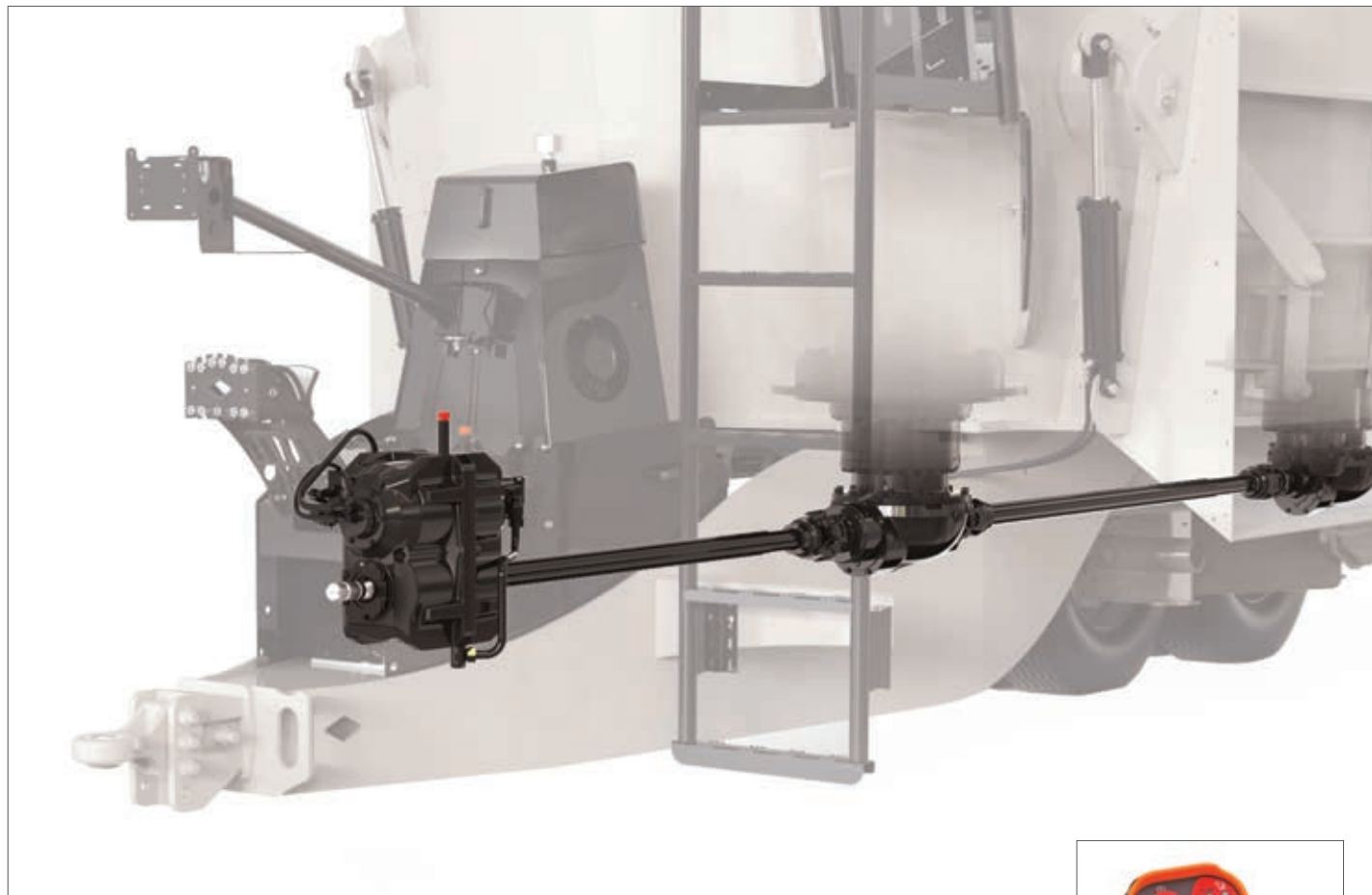
*\* Trailer Models: 30" side liner standard, 60" optional. Stationary Models: 60" side liner standard.*





# PERFORMANCE BASED ON YOUR OPERATION'S NEEDS

Depending on your operation's needs, you can choose between the 2-speed powershift or the exclusive KUHN IntelliMix™ advanced mixer control system, featuring a CVT. Both packages are able to shift on-the-go, without stopping the PTO, to maximize productivity in your mixing and feeding operations. All gearboxes on the VXL 100 Series mixers are backed by KUHN with a 5-year prorated warranty.

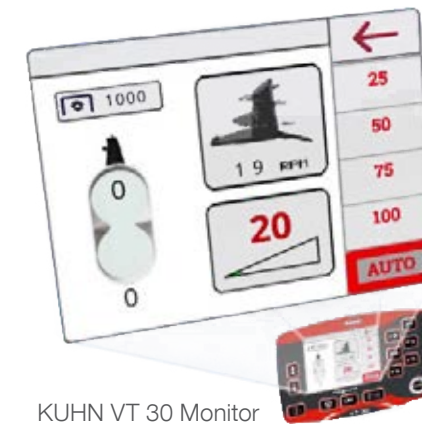


## POWERSHIFT 2-SPEED TRANSMISSION

The 2-speed powershift gearbox shifts on-the-go for faster, more consistent feed delivery without having to stop the PTO. Speeds can be switched using a wireless remote, while the PTO is still engaged for a faster and easier mixing experience, whether the operator is in the tractor or loader. Startup is in low speed and is recommended for processing and mixing materials. High speed is recommended for a fast and even cleanout.



- ✓ Shift on-the-go for more consistent feed delivery and faster cleanout
- ✓ Speeds can easily be switched using a wireless remote
- ✓ External cooling and filtration system for extended oil and gearbox life



KUHN VT 30 Monitor



## INTELLIMIX ADVANCED MIXER CONTROL SYSTEM

### INTELLIMIX™ ADVANCED MIXER CONTROL SYSTEM

The KUHN exclusive IntelliMix CVT (continuously variable transmission) package offers many efficiencies and benefits throughout all stages of mixing and feeding. This system offers the ability to run infinite auger speeds, within the designated range of 14-42 rpm, for mixing and feeding, and is unmatched by competitors.

#### REDUCE MIXING AND FEED OUT TIME

The IntelliMix control system can automatically adjust auger speeds based on changes of material volume in the mixer. This technology helps to prevent overprocessing of materials and gain a more consistent mix, while also minimizing wear because of the ability to slow down the auger speeds throughout the mixing process. It also ensures a faster, more consistent discharge and cleanout versus other transmissions. The IntelliMix CVT is ISOBUS compatible and can be easily controlled via a KUHN VT 30 or CCI 50 terminal, or other ISOBUS terminal.

#### DECREASE STARTUP TORQUES BY UP TO 50%

The IntelliMix CVT has a higher reduction to reduce the horsepower requirement, lessen strain on the driveline and provide easier startup. This lengthens the life of not only the mixer and its components, but your tractor as well, so your equipment will be ready when you are to feed the next group of cows.

#### REDUCE OPERATING COST

The IntelliMix control system automatically adjusts the auger speeds based on the load in the mixer. Customize the auger speed settings to reduce fuel usage and overall wear on the mixer and tractor.

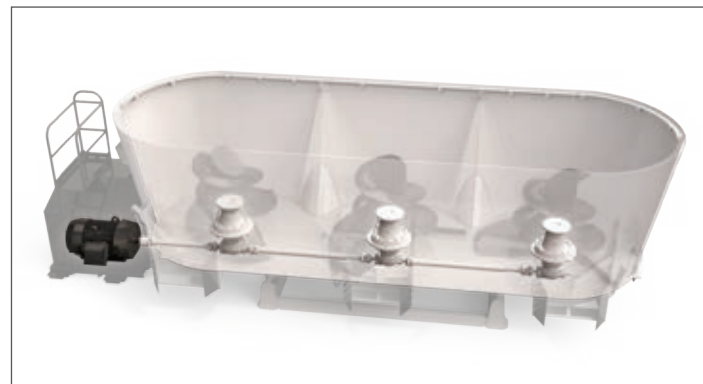
- ✓ Increased automation for greater overall mixing efficiency and better ability to focus on the task at hand
- ✓ Fully ISOBUS (plug into tractor or use KUHN VT 30/CCI 50)
- ✓ Reduced startup torque required, fuel savings and less overall wear & tear on mixer and tractor



# MAXIMIZE FEEDING EFFICIENCY

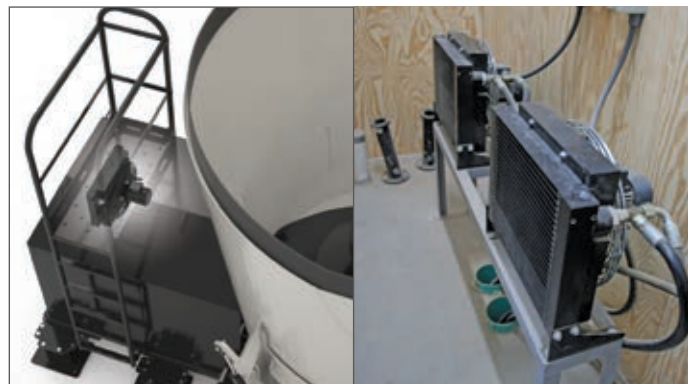


For large-scale operations looking to maximize feeding efficiency and mixer throughput, the VXL 100 Series mixers are also available in a stationary configuration. Stationary mixers are ideal for producers with centralized feed storage and multiple mixers running throughout the day. By incorporating centralized mixing, one loader operator is often able to keep multiple mixers constantly running, greatly increasing mixer throughput by up to 30% and reducing labor. Also, with the addition of delivery boxes, the mixers do not experience the downtime from driving location to location, and in turn do not receive the additional stress which can be seen from constant travel. VXL 100 Series stationary mixers are available with complete electric drive packages for efficient operation, and include many unique features, allowing them to be custom tailored to perfectly fit in your facility.



## ROBUST POWER PACKAGE

The electric motor is directly coupled to the auger planetary gearboxes through robust automotive-style drivelines. These drivelines have greater longevity in high-use and high-speed applications versus traditional ag drivelines. Stationary mixers operate with a customizable range of speeds through the use of a variable frequency drive (VFD). VFD allows the operator to achieve maximum efficiency and performance during mixing and discharge.



## PLANETARY COOLING AND FILTRATION SYSTEM

Planetary cooling and filtration system can be mounted inside the drive enclosure or mounted remotely. The cooling system keeps planetary oil cool and clean, even during extended run time, lengthening the life of the oil.

Customized to Fit Your Operation

## OPTIONAL EQUIPMENT



### TIP-OFF WITH MAGNETS

A fixed tip-off with magnets can be added to the flat, front conveyor. The magnets work to catch small metal fragments present in the feed and help prevent hardware disease.



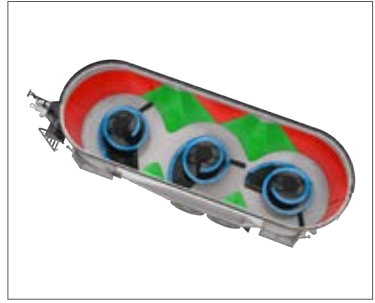
### CAPACITY BELT EXTENSION

A belt extension added to the top of the mixing tub increases capacity by about 10%. It also improves hay containment, and the rubber construction is durable and pliable for long life.



### HANGING BELT WITH MAGNETS

Either or both ends of the flat conveyor can be fitted with a hanging belt with magnets to catch small metal fragments. The hanging belt also helps to even feed flow off the end of the conveyor.



### STAINLESS STEEL LINER

A stainless-steel side liner provides extra protection in the lower part of the chamber where most wear occurs. Stainless steel baffle liners are also available.

*30" side liner: Std on trailed models.  
60" side liner: Std on stationary models.*







## GENUINE KUHN PARTS®

### No part better fits a KUHN machine than an original KUHN part

Here at KUHN, we produce spare parts built to last in our very own foundries, our forges and our ultra-modern production facilities. You can trust in our longstanding know-how, based on almost two centuries of experience. With Kuhn North America Parts, you can be assured of the highest quality parts and customer service in the agriculture equipment industry. Seven distribution centers, located strategically throughout North America, ensure that KUHN, KUHN Knight and KUHN Krause dealers have access to parts and assistance so you can get back in the tractor.



## Model Specifications

	VXL 1140 Trailer Front   Side	VXL 1140 Stationary	VXL 1165 Trailer Front   Side	VXL 1165 Stationary	VXL 1180 Trailer Front   Side	VXL 1180 Stationary
DIMENSIONS (Inches)						
Capacity	1,400 ft³ (39.6 m³)		1,650 ft³ (46.7 m³)		1,800 ft³ (51 m³)	
Capacity with Extensions	1,540 ft³ (43.6 m³)		1,815 ft³ (51.4 m³)		1,960 ft³ (55.5 m³)	
Maximum Net load	46,200 lbs (20,956 kg)		54,450 lbs (24,698 kg)		58,740 lbs (26,644 kg)	
Overall Height	122" (310 cm)	117" (297 cm)	134" (340 cm)	128" (325 cm)	140" (356 cm)	135" (343 cm)
Overall Height - 8" (20 cm) Belt Extensions	129" (328 cm)	124" (315 cm)	141" (358 cm)	135" (343 cm)	147" (373 cm)	142" (361 cm)
Overall Length	441" (1,120 cm)   416" (1,057 cm)	400" (1,016 cm)	442" (1,123 cm)   417" (1,059 cm)	401" (1,019 cm)	443" (1,125 cm)   418" (1,062 cm)	402" (1,021 cm)
Mixing Chamber Length	344" (874 cm)		348" (884 cm)		350" (889 cm)	
Overall Width - Mixer Only (No Discharge)	118" (300 cm)		118" (300 cm)		118" (300 cm)	
Tread Width	115" (292 cm)	–	115" (292 cm)	–	115" (292 cm)	–
Number of Augers	3		3		3	
PTO Drive	1,000 RPM	Direct-drive	1,000 RPM	Direct-drive	1,000 RPM	Direct-drive
PTO Protection	Torque-Disconnect	Electric-disconnect	Torque-Disconnect	Electric-disconnect	Torque-Disconnect	Electric-disconnect
PTO Minimum Power Requirement	200 hp (149 kW)	–	225 hp (168 kW)	–	250 hp (186 kW)	–
Knives per Auger (Standard / Maximum)	5/6		5/7		6/8	
Auger Diameter	104" (264 cm)		104" (264 cm)		104" (264 cm)	
Lower Auger Flighting Thickness	3/4" (1.9 cm)		3/4" (1.9 cm)		3/4" (1.9 cm)	
Upper Auger Flighting Thickness	5/8" (1.6 cm)		5/8" (1.6 cm)		5/8" (1.6 cm)	
Axle Configuration	Tandem-Axle	–	Tandem-Axle	–	Tandem-Axle	–
Unit Weight	36,300 lbs (16,465 kg)	31,020 lbs (14,070 kg)	37,500 lbs (17,010 kg)	32,220 lbs (14,615 kg)	38,400 lbs (17,418 kg)	33,120 lbs (15,023 kg)
Tongue Weight - % Gross	12%	–	12%	–	12%	–
Weighing System	5-Point	4-point	5-Point	4-Point	5-Point	4-Point
Front Door Opening Size	48" x 40" (112 x 102 cm)	–	48" x 40" (112 x 102 cm)	–	48" x 40" (112 x 102 cm)	–
Side Door Opening Size	42" x 40" (107 x 102 cm)		42" x 40" (107 x 102 cm)		42" x 40" (107 x 102 cm)	
Rear Door Opening Size	48" x 40" (112 x 102 cm)		48" x 40" (112 x 102 cm)		48" x 40" (112 x 102 cm)	
Floor Thickness	1" (2.5 cm)		1" (2.5 cm)		1" (2.5 cm)	
Sidewall Thickness	1/4" (0.6 cm)		1/4" (0.6 cm)		1/4" (0.6 cm)	
Stainless Steel Side Liner	30" (76 cm) side liner		30" (76 cm) side liner		30" (76 cm) side liner	
Highway Light Kit	Standard	–	Standard	–	Standard	–
Slide Tray - Maximum Height	9" (23 cm)	–	9" (23 cm)	–	9" (23 cm)	–
Slide Tray - Maximum Reach	29" (74 cm)	–	29" (74 cm)	–	29" (74 cm)	–
Front Flat Chain & Slat Conveyor - Maximum Reach	5" (13 cm)	–	5" (13 cm)	–	5" (13 cm)	–
Front Flat Chain & Slat Conveyor - Maximum Height	37" (94 cm)	–	37" (94 cm)	–	37" (94 cm)	–
Front Flat Belt Conveyor - Maximum Reach	5" (13 cm)	–	5" (13 cm)	–	5" (13 cm)	–
Front Flat Belt Conveyor - Maximum Height	37" (94 cm)	–	37" (94 cm)	–	37" (94 cm)	–
Mounting Base Width	–	99" (251 cm)	–	99" (251 cm)	–	99" (251 cm)
Electric Motor Horsepower	–	300 hp (224 kW)	–	300 hp (224 kW)	–	300 hp (224 kW)
Electric Motor RPM	–	1,200 RPM	–	1,200 RPM	–	1,200 RPM
Motor Housing	–	Drive enclosure	–	Drive enclosure	–	Drive enclosure
Cooling System	–	Planetary cooling system with filtration	–	Planetary cooling system with filtration	–	Planetary cooling system with filtration

<sup>1</sup> Heights and widths based on tire size listed. <sup>2</sup> Unit is equipped with most common options. <sup>3</sup> Add 3,875 lbs for motor (not included) <sup>4</sup> Horsepower requirement may vary with different materials. Consult operator's manual for proper tractor sizing.



## COMPLEMENTARY PRODUCTS

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Your KUHN dealer

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