

Drum Mowers

PZ  
SERIES



[www.kuhn.com](http://www.kuhn.com)



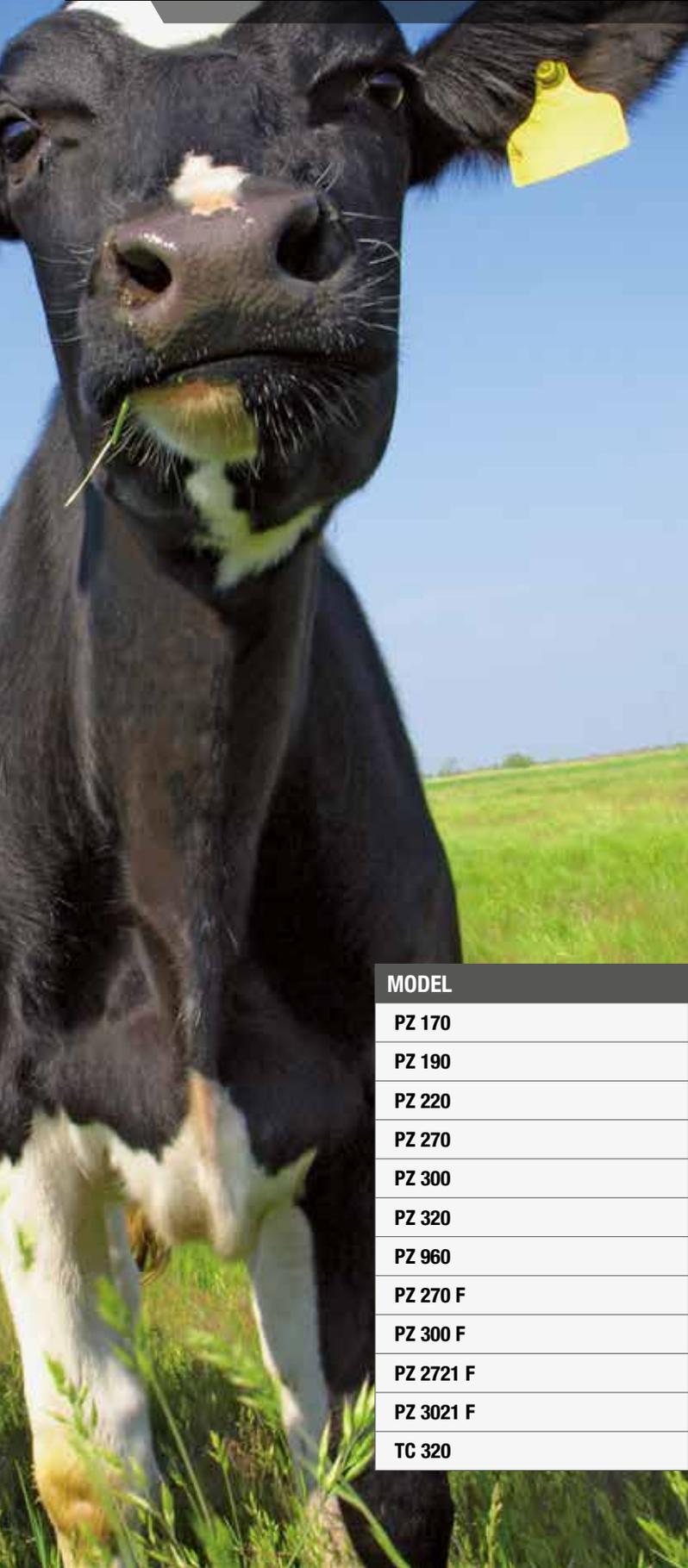
be strong, be **KUHN**



**PZ**

Series

# KUHN DRUM MOWERS GRASS HARVESTING AT ITS BEST



## A WELL-CONSIDERED DECISION

Mowing is the first and very important step in the process of making silage. Let KUHN PZ drum mowers be your choice!

## OVER 50 YEARS OF EXPERIENCE

PZ mowers build on a legacy that goes back over 50 years to the introduction of the world's first drum mowers. The new generation of KUHN PZ drum mowers has been developed using a combination of experience and the most up-to-date mowing quality, technology and design engineering.

## INNOVATIVE SOLUTIONS

The well-known features of the KUHN PZ drum mowers have been complimented by new solutions like the LIFT-CONTROL suspension system and the FLEXPROTECT protective side covers. The result is a complete range of front, rear and triple drum mower units delivering you high performance, every day.

MODEL	Working width	No. of drums
PZ 170	165 cm	2
PZ 190	185 cm	2
PZ 220	210 cm	2
PZ 270	265 cm	4
PZ 300	295 cm	4
PZ 320	310 cm	4
PZ 960	840/865/895 cm	8
PZ 270 F	265 cm	4
PZ 300 F	295 cm	4
PZ 2721 F	269 cm	4
PZ 3021 F	304 cm	4
TC 320	180 cm	-

# OVER 50 YEARS OF EXPERIENCE



**Piet Zweegers came up with his idea for the cyclo mower because mowing with the finger bar mower became harder and harder. The grass was getting heavier and thicker and the finger mower became blocked more often, causing valuable time to be lost.**

In 1963 Piet was experimenting with a hay rake with little chains under the drums. While testing the machine he discovered that the machine was mowing the crop and transporting it backwards. The idea for cyclo mowers was born. He replaced the chains with knives and increased the speed. The grass was getting mowed without shredding it and perfect swaths were created.

Patents were filed in 26 countries all over the world. Because of good relationships and license agreements with other companies, (Fahr and KUHN), a revolution in mowing was realised. The reciprocating finger bar mower of the American McCormick, which had proved its worth for more than 130 years, was replaced by disc and drum mowers of 3 co-operating manufacturers.



## **THE KUHN PZ MOWER SERIES STILL OWES THEIR NAME TO THE INVENTOR; PIET ZWEEGERS**

Around 1970 Piet Zweegers also invented the Front Mower. He made a system to put the mower in front of the tractor with the drive coming from the back of the tractor.

# FOR A CLEAN CUT

Delivering a clean cut and creating a large and fluffy swath, that is number one priority when mowing your grass or other crops for hay or silage. KUHN PZ drum mowers are uncompromising in performance and output. The proven design with its uneven or large sized diameter knife plates guarantees a clean swath formation, a cleaner product, perfect ground adaptation and high throughput with little PTO power requirement.

## HEIGHT ADJUSTMENT

The cutting height can be adjusted by adding or removing the optional spacers. This can be easily reached and infinitely adjusted. The professional PZ mower range features a continuous cutting height adjustment on top of the mower. This allows the operator to set the optimum cutting height in changing conditions in an easy and safe way. For example, you can mow a little higher in the autumn in order to reduce soil contamination in your forage.



## ROTATING SAUCERS

The freely rotating saucers have a major advantage. In uneven ground conditions, the saucer 'rotates' over the ground rather than sliding, thus protecting the stubble and reducing PTO power requirement.

The positive effects of reduced crop contamination will be particularly noticeable on sensitive soils such as boggy land.



## FLAT SIDED DRUMS

Round drums do not transport well. That is why KUHN uses drums with two flat sides for optimal crop transport without the risk of blockage. Movement of the crop has an impact on the mowing quality. It is for this reason that KUHN has chosen to use screw-on transport strips.



## QUICK KNIFE EXCHANGE

Using the special tool, you can push the knife holder down and simply replace the knives. This is a quick and secure system.



## EASY ACCESS TO THE DRUMS

The front cover can be folded away, allowing easy access to the blades. This is perfect for daily inspection and mower maintenance.



## FLEXPROTECT

Damage to the side covers is now a thing of the past. The KUHN FLEXPROTECT side covers are adding a new dimension to mowing with their design made of polythene. On encountering any obstacles, the material of the side cover bends, without breaking or damaging the mower. The material then returns back to its original shape. The FLEXPROTECT side covers are integrated on all PZ mowers, except for the PZ 170, 190 and 220.



**PZ**

170

190

220

# AS RELIABLE AND ECONOMICAL AS THE BIG MOWERS



With the three models of drum mowers PZ 170, PZ 190 and PZ 220, KUHN provides high quality technology at working widths of up to 2.10 m. These KUHN drum mowers are suitable for small and medium-sized farms. Their long-life and easy and safe operation are the key attributes of these machines. The PZ 220 can be retrofitted with a conditioner which can be removed without any tools thanks to a special centre section and practical quick-locking mechanisms.



## SAFETY BREAK BACK SYSTEM

On hitting an obstacle, the mower unit pivots back, thus absorbing the impact. Reversing the tractor re-engages the safety system, and the mower unit is set back into the work position.



## WORKING-TRANSPORT POSITION

Without leaving the tractor seat, the PZ mower units can be put easily into the transport position behind the tractor. An optional hydraulic folding cylinder is available for improved weight distribution during transport mode.



*As option available: hydraulic folding cylinder*



### **COMPENSATION SPRINGS**

Compensation springs are fitted as standard to transfer the weight from the mower unit to the tractor in order to keep ground pressure as low as possible.



### **EASY HITCHING**

The PZ 170, 190 and 220 can be hitched easily to every tractor with Cat. 1 or 2 linkage pins. KUH N can provide a special adapter to fit wider tractors.

PZ

270

300

# UNCOMPROMISING SET-UP FOR PROFESSIONAL USE

The PZ 270 and 300 models have a proven and tested drum design with over 25,000 units sold. Larger outer drums and smaller inner drums bring benefits such as perfect ground contour following, clean swath formation and large throughput.



### EASY ACCESS TO THE DRUMS

The front cover can be folded away, allowing easy access to the blades. This is perfect for daily inspection and mower maintenance.

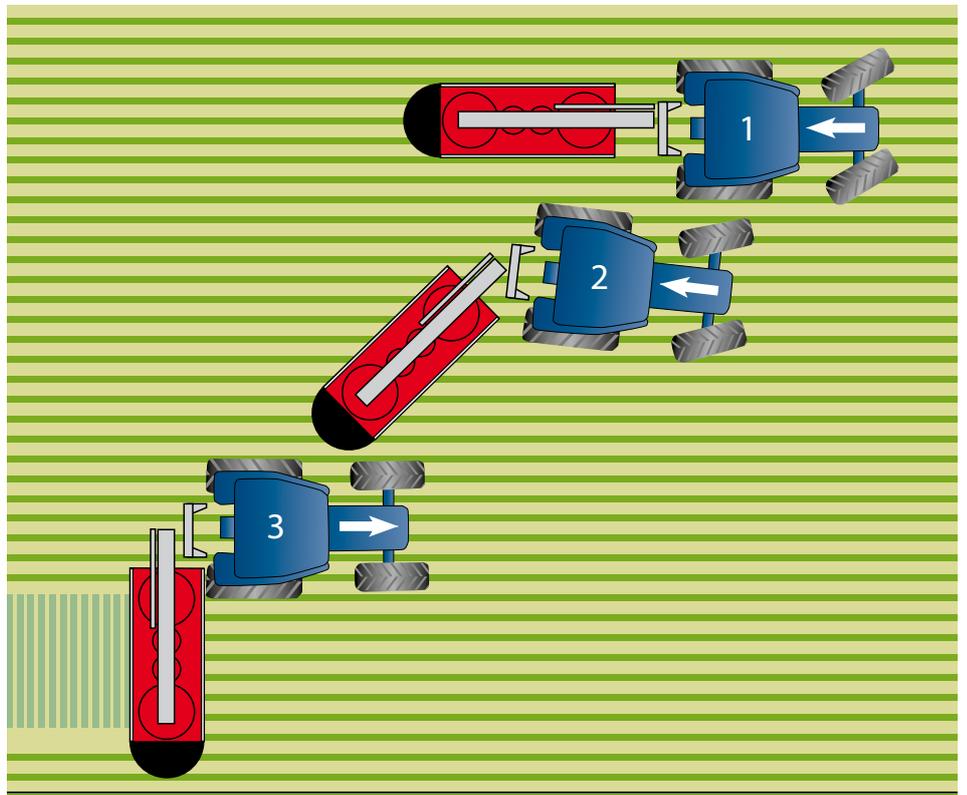
### HEADLAND CYLINDER

The optional headland cylinder offers comfort in a large extend and gives the PZ 270 and the PZ 300 sufficient ground clearance in any condition.



### 3-POINT LINKAGE

The adjustable 3-point linkage enables you to shift the machine to the left or right. When using the front and rear mower units in combination, this ensures that overlap is always at its optimum even when cornering.



### WORKING-TRANSPORT POSITION

Without leaving the tractor seat, the PZ mower units can be put easily into the transport position behind the tractor. This function can be upgraded with a hydraulic cylinder. Furthermore, an optional hydraulic folding cylinder is available for improved weight distribution during transport.

PZ

270 F

300 F

# HIGH PERFORMANCE



With the PZ 270 F and PZ 300 F models, KUHN sets the standard in this range. The drum arrangement, FLEXPROTECT side protection and accessibility have yet to meet their match. The mower unit attachment with two larger outer drums and two smaller inner drums ensures maximum forage throughput. In this way, you can deposit a double swath that can be easily picked up by any following machine. Using the generously dimensioned swath discs, the finest of adjustments can be made: a narrow swath (90 cm) for day-to-day gathering of forage from sloping terrain, or a wide swath for hay.



*PENDEFLEX pendulum headstock*

## **OPTIMAL GROUND ADAPTATION**

The PENDEFLEX oscillating headstock enables ground contour following in lateral and longitudinal direction for superior ground adaptation in hilly conditions. Moreover, the PENDEFLEX headstock ensures reduced wear, a lower power requirement and a preserved grass stubble. The fixed headstock is a simple and economical solution for slightly hilly grounds. The flexible top link FLEXTOP or telescopic top link FRONTFLEX are available as an option.



*Fixed headstock + FRONTFLEX*

## **FOLDABLE FRONT AND SIDE COVERS**

The foldable front and side protective covers can be lifted upwards, convenient for daily inspection and blade changes.



**CUTTING HEIGHT ADJUSTMENT**

The continuous cutting height adjustment on top of the mower allows you to set the optimum cutting height in changing conditions in an easy and safe way.

This allows you for example to mow a little higher in the autumn in order to reduce soil contamination in your forage.



**PERFECT SWATH FORMATION**

The proven design with its uneven sized diameter knife plates has great benefits: a narrow swath formation, a cleaner product, perfect ground adaptation and high throughput with low PTO power requirement.



TC

320

# A CONDITIONER FOR SILAGE OR HAY HARVESTING

The KUHN TC 320 3-point mounted conditioner offers you extreme flexibility and high performance for all crop types and in all conditions. Hay or silage, flat or steep slopes, this independent conditioner guarantees you high quality products.

The TC 320 has a low horsepower requirement. The pick-up rotor collection system guarantees optimal preservation of the nutritional value of your crop and offers high versatility in terms of crop types. The well thought design makes the conditioner suitable for all terrain and weather conditions whilst ensuring a long service life.

The conditioning speed can be matched to the actual weather and field conditions by selecting 815 or 650 rpm. The adjustable hood enables you to create a narrow swath of 1.00 m or opt for wide spreading up to 3.10 m instead.



*Adjustable conditioner intensity*



*Large pivoting wheels*



The fixed headstock with oscillating lower link pins allows the machine to follow the ground contours whilst the machine stays in line with the tractor, even on steep slopes. Large pivoting wheels are situated close (16 cm) to the conditioner, which results in perfect ground adaption. Because they are independent from the conditioner and fixed onto the headstock frame, it eliminates additional stress on the conditioner itself. This results in an extended service life.



*Adjustable spreading width*



*Conditioner rotor speed of 815 rpm can be changed into 650 rpm by changing the sprockets*

PZ

2721 F

3021 F

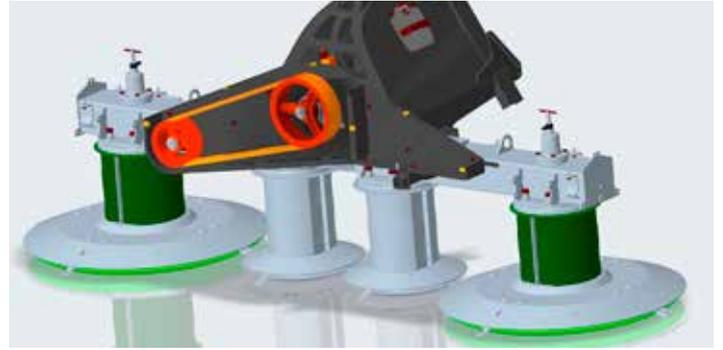
# SUCCESS THROUGH EXPERIENCE

The KUHN PZ 2721 F and PZ 3021 F front drum mowers stand for optimal mowing performance in the most challenging conditions. The proven features of PZ mowers are complimented by new solutions to meet today's and tomorrow's demands. The stable and rigid mainframe together with a robust driveline make this mower suitable for both regular and larger tractors.



## A SMOOTH START-UP

The reliable V-belt driveline protection ensures an easy start-up of the machine. The V-belt drive with large bearings and axle can transfer 30 % more power than previous models. This makes the mowers suitable for both regular and larger tractors.



V-belt driveline

## MODERN DESIGN WITH FLEXPROTECT FLEXIBLE SIDE COVERS

On hitting an object, the redesigned patented\* KUHN FLEXPROTECT side covers bend to prevent damage to the mower. The material then returns back to its original shape. This is especially useful when mowing around poles or along around the edges of a field. The modern design of the mower features standard integrated warning signs and road lights for maximum visibility and safety on the road.



FLEXPROTECT flexible side covers



Easy access for cleaning and maintenance

## USER COMFORT

All adjustments and operator handlings are easy to perform. The unique knife changing system enables quick knife exchanges with minimal force. The continuous height adjustment allows the operator to set the optimum cutting height in changing conditions in an easy and safe way. Robust drive units with spiral-toothed gears give maximum power transfer at a comfortable sound level, a benefit for both the driver and the environment.



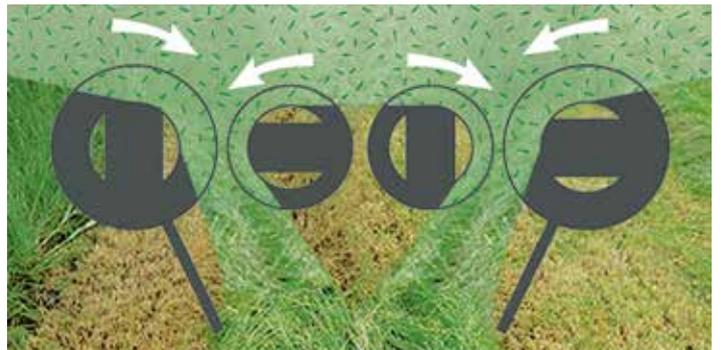
Continuous height adjustment



Quick knife exchange system

## CREATING A NARROW SWATH

The typical PZ 'big & small' knife plate layout provides a narrow swath, secured via the standard swath discs. Another advantage of this typical layout is the very low power requirement thanks to the large throughput opening between the drums. This narrow swath fits within the tractors tyres and prevents damage and contamination of the cut crop.



The 'big & small' knife plate layout provides a narrow swath

## HEADSTOCK CHOICE

You have two choices of headstock to fit your working conditions. The fixed headstock enables ground adjustment in the driving direction via the optional telescopic top link. The pendulum headstock enables ground adjustment in the driving direction via an integrated telescopic top link and 8.5° adjustment perpendicular to the driving direction via the linkage arms.



Fixed headstock

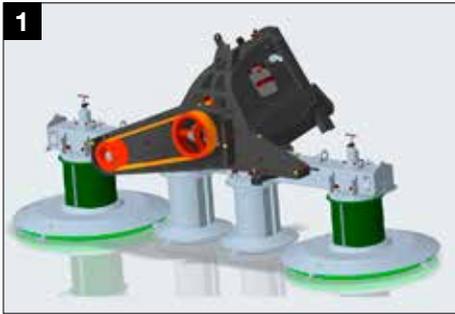


Pendulum headstock

\*Patent or patent pending in one or more countries.

# OVERVIEW PZ 2721 F - 3021 F

## MACHINE HIGHLIGHTS



V-belt drive with large 40 mm bearings & strong mainframe



Redesigned FLEXPROTECT flexible side covers



Continuous height adjustment



Knife changing system with special tool and knife holder

# OPTIONS



Standard swath discs securing a narrow swath



Fixed headstock



Pendulum headstock



FLEXTOP flexible top link connection  
(only in combination with a fixed headstock)

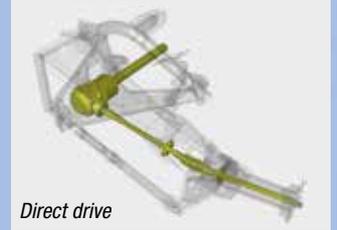


FRONTFLEX telescope top link  
(only in combination with a fixed headstock)



Mirror set

# INNOVATIVE SUSPENSION SYSTEM



Direct drive



The KUHN PZ 320 is fitted as standard with LIFT-CONTROL. This hydro-pneumatic suspension system continually ensures a uniform ground pressure, a lower pulling power requirement and enables non-stop mowing. The mower has a direct driveline with integrated slip clutch and freewheel. For stable transport the machine has a vertical transport position of 120°, the weight of the machine is placed more evenly between the rear wheels. The foldable front cover and FLEXPROTECT side covers provide easy access to the drums, ideal for daily inspection and maintenance of the mower unit.

## THE LIFT-CONTROL SYSTEM: SMART KINETICS

Improve the quality of your forage and reduce downtime by using the exclusive LIFT-CONTROL suspension system. LIFT-CONTROL is much more than just a suspension system with a nitrogen accumulator replacing the traditional spring. It is an active and dynamic hydro-pneumatic suspension system making use of the kinetic forces that act on the mower unit.

The clear benefits of KUHN LIFT-CONTROL are:

- Constant ground pressure
- Excellent terrain following
- Non-stop safety breakaway
- Less soil in the crops
- Minimise torn up ground

It is when mowing on slopes that the LIFT-CONTROL system shows all its advantages and is reflected in a distinct reduction of fuel consumption and a higher working rate.

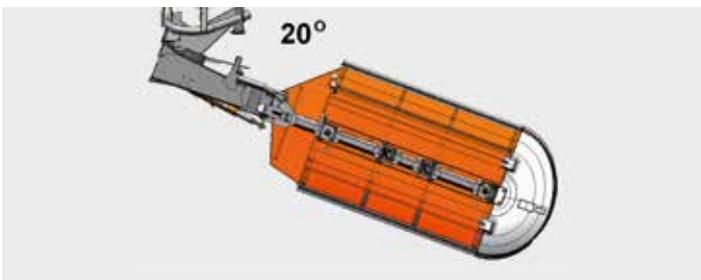
## ADJUST PRESSURE EASILY AND ACCURATELY

Because time is money, adjusting the weight reducing pressure takes just a few seconds! Through the accumulators, the ground pressure can be adjusted with great precision to the harvesting conditions, easily from the tractor seat. Therefore, on wet land minimal pressure on the ground prevents the fodder from becoming clogged and soiled. Lateral force, wear on the drums and tensile strength will be significantly reduced. As the force on the mower unit increases, the LIFT-CONTROL system automatically will lighten and raise the unit. The greater the force, the lighter the mower unit gets.





When hitting an obstacle the complete mower unit will pivot hydro-pneumatically back- and upwards by the use of LIFT-CONTROL. The hinge point of the mower is on the left side of the tractor instead of in the middle, so all drums are optimally protected (also the ones closest to the hinge point, because of added space between hinge point and first drum).



For stable transport the machine has a vertical transport position of 120°, the weight of the machine is placed more evenly between the rear wheels. This increases the safety and comfort in transport significantly and the tractor lights are always visible. The frame has been redesigned to enable a low transport height, 3,6 m headway with a ground clearance of 40 cm. And in the working position a normal ground distance, with a ground clearance of 50 cm.



The between frame always has the optimum height in every position: Low enough in transport and high enough in working and headland position.

# EASY TOWING AND HIGH OUTPUT

If you want to mow wide working widths, the PZ 960 is the right mower combination for you. With its two mower units (of the PZ 320), mowing up to a width of 8.95 m is possible with the PZ 960 front and rear combination. Farms with tractors in the 74 to 110 kW/100-150 hp range can now achieve maximum mowing widths, and therefore the highest work rates.



## **SIMPLY IMPRESSIVE: THE PZ 960 FRONT AND REAR COMBINATION**

The two rear units of the mower combination are built from a tested and proven design. One special feature is its arrangement of mower drums: larger outer drums and smaller inner drums produce a swath form to match intake and follow the contours of the land perfectly. The freely rotating saucers make this mower very easy to tow.

## **COMPACT DESIGN FOR BEST WEIGHT TRANSFER**

The PZ 960 has a weight of 1900 kg. With one front mounted mower and two mowers attached to the rear of the tractor, this mower combination ensures an excellent weight transfer for the best maneuverability in sloping terrain.

## **LIFT-CONTROL**

The PZ 960 is fitted as standard with a hydraulic safety break back system. On hitting an obstacle, the mower units move upwards and backwards, independently of each other. This hydraulic break-back system also controls the ground pressure hydro-pneumatically.



*More information about the LIFT-CONTROL system can be found on the PZ 320 LIFT-CONTROL pages*



*Independent lifting. The PZ 960 drum mower rear combination is equipped with a functional hydraulic valve as standard*



*With minor adjustments and an attachment kit for the front mower, it is possible to use the triple mower in a reverse drive combination*

**ADJUSTABLE WORKING WIDTH AND OVERLAP**

The working width of the mower can be adjusted to 3 different sizes: 8.40 m, 8.65 m and 8.95 m. This enables you to work with front mowers of different working widths and allows you to choose the right overlap when working on slopes.



*Three different working widths*



*For a road transport width of less than 3.00 m, the mower units are swung upwards using hydraulic cylinders*

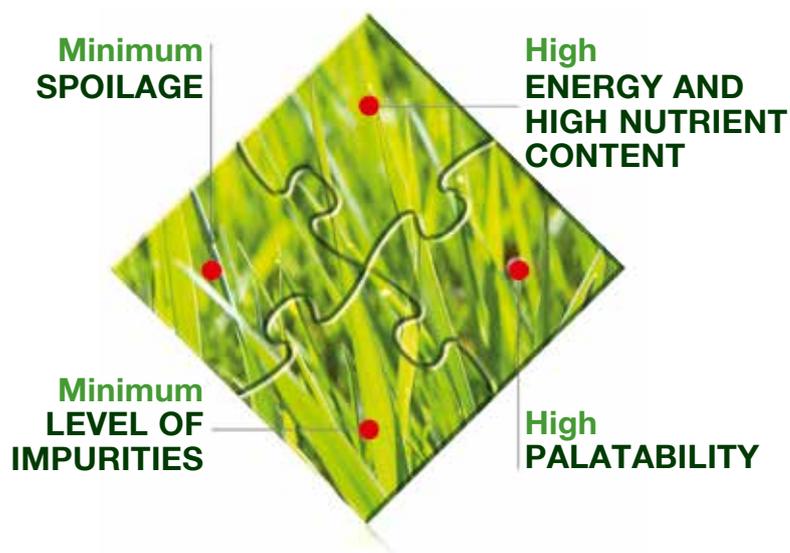
# SIMPLY GREAT FORAGE!



Did you know that you can save concentrates worth 89 €/ha a year, just by reducing the impurities in the forage from 4 to 2 %\*? We are here to help you produce top quality forage.

We would like to pass on several decades knowledge of forage production. We can provide advice for you to produce first-class animal feed and help you to understand the advantages of our machines in order for you to use them in an optimal way to preserve the quality of your forage.

With KUHN expertise, you will harvest forage with...



\*Source: Agricultural chamber Weser-Ems, Germany.

Find all our expertise on forage. [KUHN.com/en](http://KUHN.com/en)



be strong, be **KUHN**

## KUHN PARTS

DESIGNED AND MANUFACTURED TO TIME



KUHN foundries and forge as well as a high-level manufacturing process allow the production of spare parts to defy time. You can truly rely on our know-how and our genuine parts. Farmers benefit from our client support and logistics services via any KUHN PARTS warehouse, which provide quick and reliable repair solutions in cooperation with your nearest authorized KUHN dealer.



SPECIFICATIONS							
	PZ 170	PZ 190	PZ 220	PZ 270	PZ 300	PZ 320	PZ 960
Working width	165 cm	185 cm	210 cm	265 cm	295 cm	310 cm	840/865/895 cm
Transport width	140 cm	150 cm	160 cm	180 cm	200 cm	230 cm	300 cm
Linkage	Cat. 1 - 2			Cat. 2			
Number of drums	2			4			8
Number of knives	6		8	10	12		24
Cutting height adjustment	spacers					continuously	
Quick change knives	◆						
Swath discs	(1x) ◇			(2x) ◇			
Hydraulic folding of the side guards	-			-	-	◇	◇
PTO speed (min <sup>-1</sup> )	540			540 ◆ / 1000 ◇			1000
Wheels	-						
Weight	≥ 380 kg	≥ 420 kg	≥ 580 kg	≥ 725 kg	≥ 785 kg	≥ 800 kg	≥ 1900 kg
Minimum required tractor hydraulic connections	-					1x DA + 1x SA	1x DA + 1x SA
Minimum PTO power requirement	20 kW (27 hp)	25 kW (35 hp)	30 kW (40 hp)	40 kW (55 hp)	47 kW (65 hp)	51 kW (70 hp)	85 kW (115 hp)
◆ standard ◇ optional equipment - = not available							

SPECIFICATIONS					
	PZ 270 F	PZ 300 F	PZ 2721 F	PZ 3021 F	TC 320
Working width	265 cm	295 cm	269 cm	304 cm	180 cm
Transport width	255 cm	285 cm	260 cm	295 cm	255 cm
Linkage	Cat. 2 A-frame				Cat. 2
Number of drums	4				-
Number of knives	10	12	10	12	-
Cutting height adjustment	continuously				-
Quick change knives	◆				-
Swath discs	(2x) ◆ / (2x) ◇				-
Hydraulic folding of the side guards	-	-	◇	◇	-
PTO speed (min <sup>-1</sup> )	1000 ◆ / 540 ◇ / 740 ◇	1000 ◆ / 540 ◇ / 740 ◇	1000 ◆ / 740 ◇	540 ◆ / 1000 ◇	
Wheels	-				6.00-9 6PR
Weight	≥ 545 kg	≥ 645 kg	≥ 675 kg	≥ 720 kg	≥ 475 kg
Minimum required tractor hydraulic connections	-				
Minimum PTO power requirement	37 kW (50 hp)	44 kW (60 hp)	40 kW (54 hp)	45 kW (60 hp)	18 kW (25 hp)
◆ standard ◇ optional equipment - = not available					

# DESIGNED BY KUHN, MADE BY KUHN

Check out KUHN's disc mower range as well



1. Front-mounted disc mower conditioners - 2. Trailed disc mowers - 3. Rear-mounted disc mowers - 4. Rear-mounted disc mower conditioners - 5. Triple gang combinations - 6. Trailed mower conditioners

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Your KUHN dealer

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