



175
Years of Excellence

Mower conditioners

FC 302 / FC 352



Grass harvesting at its best!

MOWER CONDITIONERS FC 302 / FC 352

30 years of expertise...
...at your service!

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A high working speed, superb conditioning that halves drying time, and heavy duty construction for a long reliable life, Kuhn disc mower conditioners let farmers experience grass harvesting at its best! With several hundred thousand mower conditioners manufactured over the past thirty years, Kuhn has constantly refined the FC mower conditioner range to become the world's leading manufacturer of multidisc cutterbars.



1. Computer-Aided design

CAD helps to design and optimise the machines that Kuhn supplies to its customers. Computerised analysis of world-wide endurance testing results is also used to design the best disc mower that money can buy. State of the art technology and innovation in the Kuhn Research and Development department ensure Kuhn's place as world leader in disc mower development.

2. Mastering science and technology

To offer the highest quality machines possible, Kuhn invests heavily in the most sophisticated manufacturing equipment available.

3. Strict monitoring

Equipped with ultra-modern instruments, Kuhn's computer-controlled machining centres ensure that specifications are strictly adhered to throughout the manufacturing process.

30 years ago...



Two working widths and a range of equipment to meet every farmer's needs!



Mower conditioners FC 302

Kuhn Finger/Comb Conditioning System

Working widths of 3 to 3.5 m - standard straight hitch with dual input-shaft speeds 540/1000 rpm (FC 302/FC 352) or GYRODINE™ swivel hitch (FC 302 G - FC 352 G) - Adjustable wide swath shields for wide spreading on 3 m models.

Rubber roller conditioning system

Working widths of 3 to 3.5 m - GYRODINE™ swivel hitch (FC 302 RG - FC 352 RG) - Adjustable wide swath shields on 3 m models.

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FC 302 / FC 352

Designed for top manoeuvrability and easy operation

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1. Straight hitch

For an economical alternative to the Kuhn GYRODINE™ swivel hitch, the FC 302 model is available with a straight hitch. Through the use of a hitch extension, sharp turns of up to 90° may be made. The straight hitch offers both 540 and 1000rpm input speeds.



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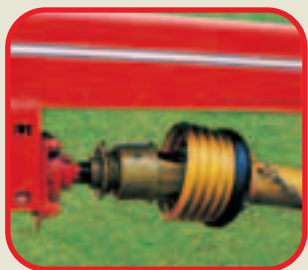
2.3. GYRODINE™ swivel hitch

The GYRODINE™ swivel hitch offers many advantages. Exceptional turning ability in situations where it is almost impossible to turn with a straight hitch model. Reliable and chatter free operation as the PTO shaft is always perfectly aligned with the tractor around the tightest corners. Convenience thanks to quick attachment, 2-input shaft (540 and 1000 rpm) speeds, productivity, and ease of operation even in difficult conditions.



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1. Intermediate PTO shaft drive with free wheel

The cutting-conditioning head is driven by a transmission shaft, which unlike other types of drive systems, keeps maintenance to a minimum. The overrunning clutch protects the mower conditioner and the tractor PTO brake when the PTO is shut off.

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2. Friction slip clutch

An adjustable friction slip clutch protects drive components from overloading.

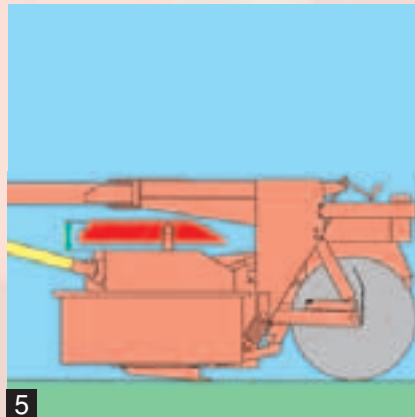
4.5. A cutting and conditioning head that offers a full range of floatation

The strong 4-point system used to attach the header to the frame offers added strength and reduces stress on the frame. With free movement, it has an excellent ground following capability, and provides a high quality cut, reduces dirt in the windrow, and minimises scalping and damage to the stubble.



6. Easily adjusted suspension

The floatation springs are easily adjusted with crank handles to adapt the cutterbar floatation to varying ground conditions and forward speed.



7. High ground clearance

When the cutting/conditioning head is fully raised there is sufficient clearance to pass over most swaths and obstacles.



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3. Mechanical tongue shift

A simple rope-activated mechanical latch is available for setting the machine from field to transport position and back. The mechanical system is more economical than the hydraulic version, and is necessary for tractors equipped with a limited number of hydraulic remotes.



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4. Hydraulic tongue shift

For convenient operation, tongue adjustment is controlled by a double acting hydraulic cylinder.

MOWER CONDITIONERS

FC 302 / FC 352

The importance of a close inside look.

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Some mower conditioners may look like a Kuhn machine from the outside! However, close inspection will show distinctions that will make all the difference in the long run. With a KUHN mower conditioner, careful design and quality construction materials and techniques leave nothing to chance.

High capacity, triple lip sealed bearings with additional protection against wrapping are used to withstand the toughest operating conditions.

PROTECTADRIVE®
Protectadrive system that protects the gear train should a major obstacle be struck.

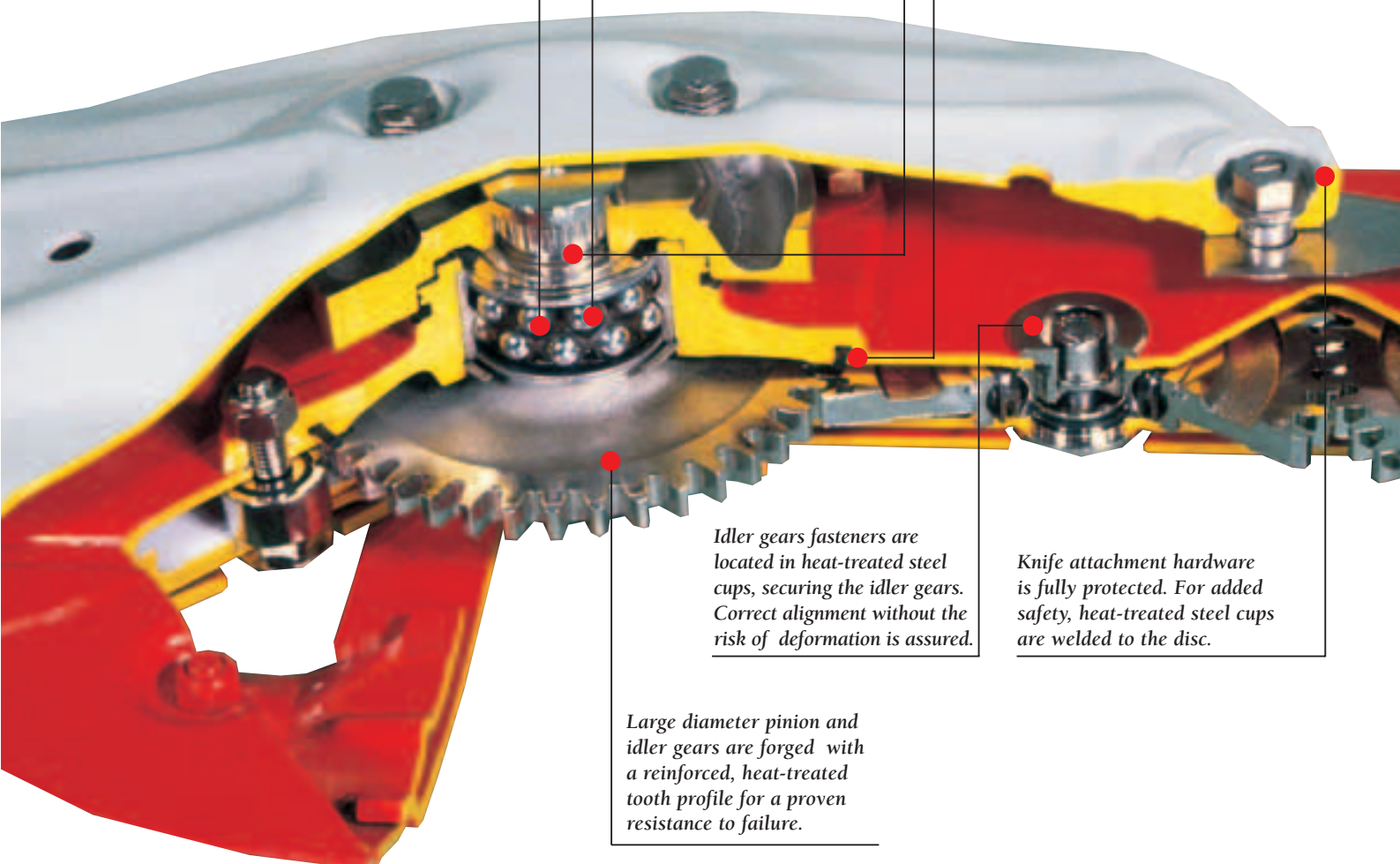
Disc pinion shaft bearings are in line with respect to forces that act on the knives for long bearing life.

Uniform sealing of the cutterbar is provided through the use of O-rings.

Idler gears fasteners are located in heat-treated steel cups, securing the idler gears. Correct alignment without the risk of deformation is assured.

Knife attachment hardware is fully protected. For added safety, heat-treated steel cups are welded to the disc.

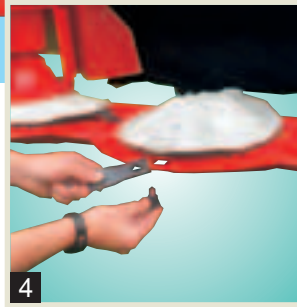
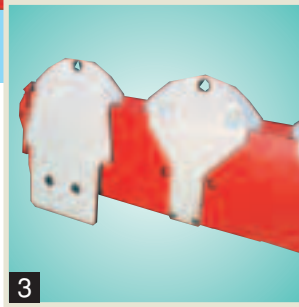
Large diameter pinion and idler gears are forged with a reinforced, heat-treated tooth profile for a proven resistance to failure.



Detailed view of Kuhn mower conditioner cutterbar compo



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1. Specially designed discs

An oval shaped disc offers numerous advantages over other shapes. The crop is ejected quickly and the knives have a greater overlap for a cleaner cut. The larger diameter of the disc, especially designed for trailed FC mower conditioners, positively supplies cut material to the conditioning unit for optimum results.

protect the cutterbar from being struck by knives bent should an obstacle be hit.

4. Reinforced and easily replaceable knives

Kuhn knives are made of high quality steel and manufactured to very strict standards. For safety and long life, knives are secured with specially designed bolts made of special steel, not with “quick fastening” devices. The knives are easily changed or reversed with the help of a bolt access hole at the front of the skids.

2. A compact and streamlined cutterbar.

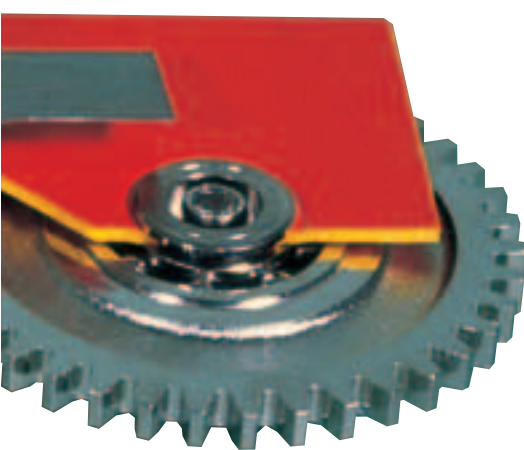
The flat, compact cutterbar has a streamlined shape so soil and crop residue do not accumulate, the cut crop flows cleanly over the cutterbar, even in dense crops.

5. Protectadrive™ cutterbar protection system

The Protectadrive™ disc protection system normally protects the gear train should a major obstacle be struck in the field. Fast and easy removal and installation of the disc bearing station without the need to remove the cutterbar from the machine minimises downtime and costs. Protectadrive™ is exclusive to Kuhn.

3. Cutterbar protection

Extra rigidity is ensured with the cutterbar gearcase mounted inside a steel cradle with a rear stiffener. One-piece disc guards and skid shoes are made of heat-treated steel to protect the discs. These are attached to the front and rear of the cutterbar assembly which makes them easily replaceable if necessary. Deflector shields are fitted between the disc guards to



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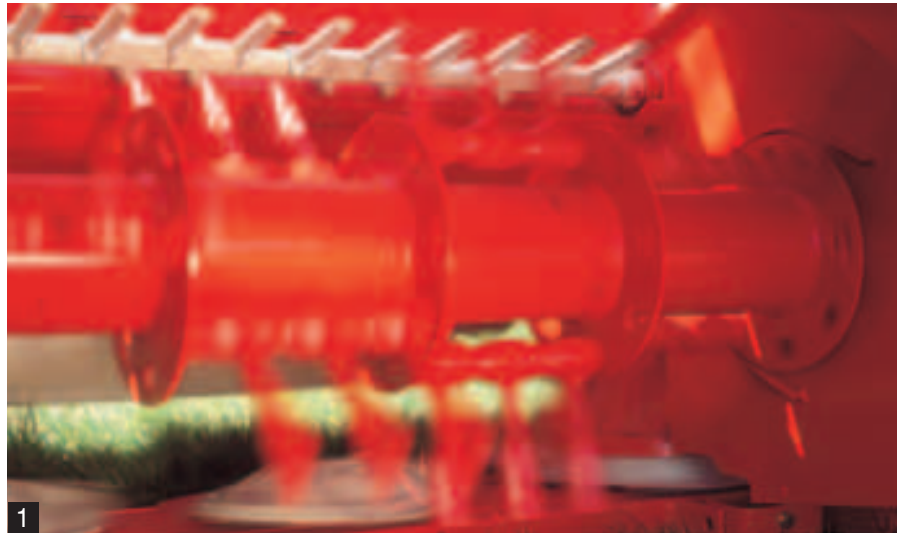
FC 302 / FC 352

Choice of Finger/Comb or roller for “made to measure” conditioning...!

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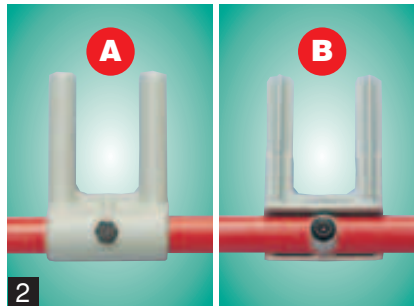
1.2. Kuhn Finger/Comb Conditioning System

With an adjustable 2-sided reversible comb (A and B), a Kuhn FC mower conditioner can be quickly adapted to different crops and various conditioning needs. The round side of the comb provides gentler conditioning while the aggressive “T” side of the comb is used to meet heavy conditioning requirements. Round and smooth forged steel fingers are used so that the crop is not damaged by sharp edges. For even more adjustment, the speed of the rotor can be changed by swapping the pulleys.



3. Comb adjustment

Conditioning intensity is quickly adjusted with a conveniently located lever. Five positions adjust the conditioning from maximum to minimum. Should a foreign object enter the machine, the comb is spring loaded to swing back and then automatically return to its original position.

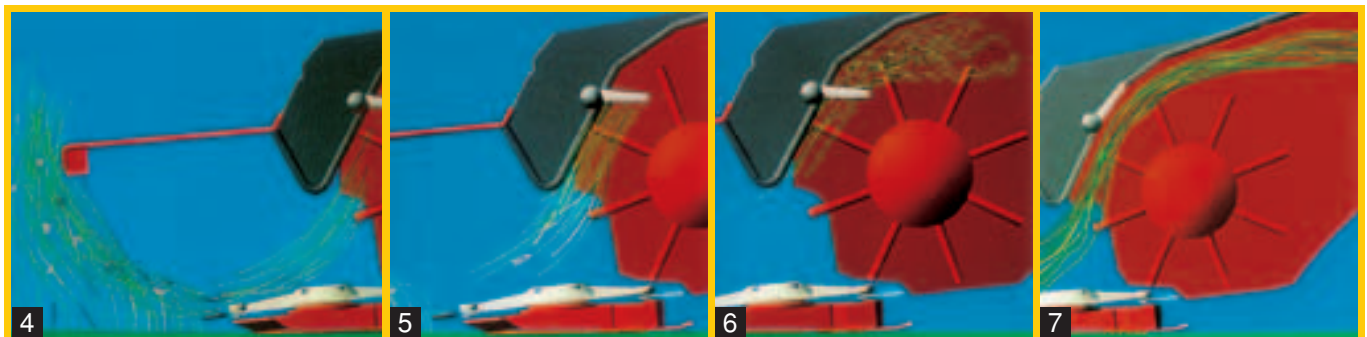


4.5.6.7. Stages of conditioning

4. The crop enters the conditioner with the cut end first. The rest of the crop is then drawn through the conditioner.

5. The natural wax coating on the stems and leaves is broken down due to friction between the crop and the finger and comb. The smooth round sides of the fingers ensure that thorough conditioning occurs without aggressively stripping the leaves from the stem.

6. The conditioning process continues along the length of the stem as it passes through the system. This maximises conditioning increasing evaporation from the crop in the swath and minimises drying time.
7. With the comb completely raised the conditioning effect is minimal.





8. Rubber rollers with chevron-form ribs

Specially developed for conditioning clover, alfalfa and leguminous crops with fragile leaf stalks, the FC 302/352 are equipped with rubber rollers having chevron-form ribs. Rollers intermesh with a gentle, regular

action, no jerks or jolts. The converging spiral movement of the ribs from outside to center conditions crops both axially and transversally. Stems are burst open and their natural wax coating is fragmented. This “double action” conditioning enables stems to dry at the same rate as the leaves.

9. Conditioning intensity

Roller pressure is controlled by two centrally adjustable torsion bars. Conditioning action is consistent across the entire conditioning width regardless of the amount of crop moving through the machine.

Safe and simple transport

1. Overall transport width is practically the same as the cutting width. Tongue positioning during transport centres the FC behind the tractor, for easy manoeuvring on roads and through gates.

2. Large, high profile tyres

FC mower conditioners are fitted with large diameter high floatation tyres, for exceptional grip during work and transport.

3. Lighting and signalling system

All FC 302 and FC 352 machines are equipped with lighting and signalling systems.



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MOWER CONDITIONERS

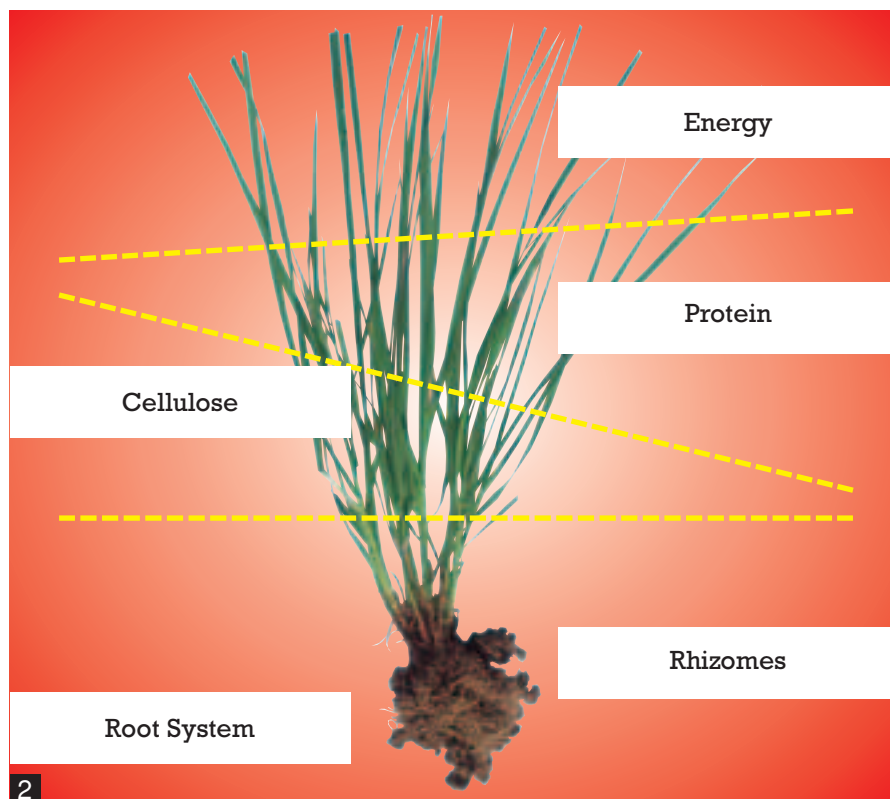
FC 302 / FC 352

The farmer's goal is to produce top quality, high value dry hay or silage.

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Many factors influence the quality of dry hay or silage. Obviously the mower conditioner cannot affect the amount of sun, rain, soil and the type of grass or legumes grown. The performance of the mower conditioner does affect drying time, re-growth of the next crop, and retention of the nutritional and cash value of the crop after it has been cut.

Kuhn mower conditioners are designed with the needs of the farmer to maintain the highest possible quality and value in the crop. Particular attention is paid to how the crop is cut and laid out in swaths.



1. A clean, even cut

A uniform and even cut will increase the yield and make tedding, raking and baling easier. Cleanly cut stubble will regrow more quickly.

Kuhn bevelled knives provide a high quality cut.

2.3. Controlled cutting height

A correct cutting height is important. Cut too low and the regrowth of the crop can be affected. Contamination of the crop by dirt and impurities is also increased as well as wear on the mower. By simply adjusting two turn-buckles cutting height is adjusted. (Raised skid shoes are also available for special conditions).



4. Field and terrain flotation

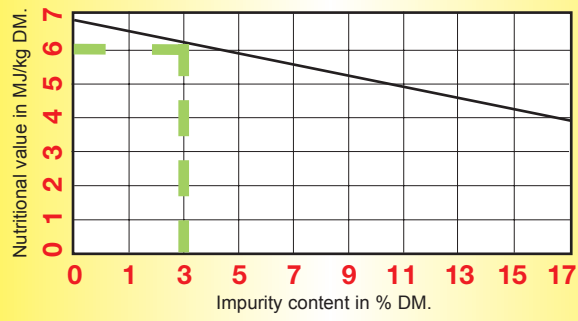
The adjustable flotation springs optimise the weight of the cutterbar on the ground improving the cut and reducing scalping on rough terrain. Grass stubble is preserved and crop is not soiled.



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GRAPHICAL REPRESENTATION OF THE EFFECT OF IMPURITIES ON THE NUTRITIONAL VALUE OF HAY

(Source : I.N.R.A.)



The best hay will have an impurity level no greater than 3% for an average energy level of 6 MJ/kg DM.

5. Well formed, airy swaths

Adjustable swath deflectors allow ideal swath formation according to the conditions. Well formed, fluffy swaths build up the best conditions

for fast and homogeneous drying of the crop. Tractor wheels will never roll over the swath.

Well formed, fast drying swaths



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5.6. Large width swaths

By using the adjustable wide swath shields on FC 302 mower conditioners, the crop can be spread over the whole conditioner width. On FC 352, the adjustable swath deflectors enable to lay the swath over the whole inner wheel track of the machine.

7. Swath grouping with the "RA" attachment for the FC 302 / FC 352

Ideally suited for a 3.00 m (10') harvester's pick up, the "RA" swath grouper forms twinned swaths of 2.30 m (7'6") (FC 302) or 2.70 m (8'8") (FC 352). The conveyor belt speed is adjustable according to forward speed, the swath width required, and the crop density.

Technical Specifications	GYRODINE™ hitch				Straight hitch
	FC 302 G	FC 302 RG	FC 352 G	FC 352 RG	FC 302
Conditioning	Finger rotor and adjustable/reversible comb	Rubber rollers	Finger rotor and adjustable/réversible comb	Rubber rollers	Finger rotor and adjustable/reversible comb
Attachment	by pivoting lower links to the tractor lift arms				by a hitch extension on tractor drawbar
PTO drive (rpm)	540 and 1000				
Cutting width (m/ft)	3.00 (9'10")		3.50 (11'6")		3.00 (9'10")
Conditioning width (m/ft)	2.22 (7'3")		2.70 (8'10")		2.22 (7'3")
Number of discs	6		7		6
Number of knives per discs	2				
Rotor speed (rpm)	1000** and 810	-	1000** and 810	-	1000** and 810
Roller speed (rpm)	-	810**and 1000	-	-	-
Swath width (min./max.) (m/ft)	0.80 to 2.20 (2'7" to 7'3")	0.80 to 2.20 (2'7" to 7'3")	1.10 to 2.70 (3'7" to 8'10")	1.10 to 2.20 (3'7" to 7'3")	0.80 to 2.20 (2'7" to 7'3")
Wide swath shield	•	•	•		•
Adjustable swath deflectors	•	•	•	•	•
PTO transmission shaft with free wheel and friction slip clutch	•	•	•	•	•
PTO power requirement (as from) (kW/hp)	52/70		66/90		52/70
Hourly work rate (approx.)	2.5 to 3 ha (5 to 6 acres)		3 to 3.5 ha (7 to 9 acres)		2.5 to 3 ha (5 to 6 acres)
Overall transport width (m/ft)	3.00 (9'10")		3.50 (11'6")		3.00 (9'10")
Hydraulic connections required	1 single-acting outlet & 1 double-acting outlet				
Lighting and signalling system	Standard				
Tyres	11 L x 16 ribbed tread				
Weight with PTO shaft (kg/lbs.)	1950/4290	1950/4290	2050/4510	2050/4510	1800/3960
Optional equipment					
Mechanical tongue shift	•	•	•	•	•
Hydraulic tongue shift	•	•	•	•	•
Swath grouper attachment (conveyor belt type)	•	•	•	•	•

** Factory set
Rotation speed (rpm) may also be expressed as rotational frequency (min⁻¹). Both units of measure are equivalent.

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KUHN S.A. - F 67706 Saverne Cedex
www.kuhnsa.com - info@kuhnsa.com



U.S.A. : KUHN FARM MACHINERY, INC
5390 East Seneca Street
VERNON, NY 13476 - 0840
Phone : (315) 829 2620 - Fax : (315) 829 2270
www.kuhn-usa.com - infousa@kuhn-usa.com

KUHN FARM MACHINERY PTY, LTD
7 Manorwood Pl.,
MITCHAM, 3132 VIC,
Fax : 03 9874 3462
www.kuhnsa.com - info@kuhnsa.com

Your KUHN dealer :

United Kingdom : KUHN FARM MACHINERY (U.K.) LTD
Stafford Park 7,
TELFORD - SHROPSHIRE TF 3 3 BQ
Phone : TELFORD (01952) 239300/1/2 - Fax : (01952) 290091
www.kuhn.co.uk - infouk@kuhn.co.uk