



**ROTARY RAKES**

**BASKET RAKES**

[www.samasz.com.au](http://www.samasz.com.au)



# 1 – rotor rake

Z-351, Z-440

**Rotary rakes Z - series** are made for middle and small farms, with working widths from 3,00 m up to 4,70 m (9'10" up to 15'5").

## Shock absorbtion

Damping braces, on both sides, as standard equipment in Z - 410, Z - 440 and Z - 470. During lifting and transport, dampers ensure position and stability of the unit.



**Z - 410**



**Z - 350**



## Oil operating gearbox

- quick connecting rod replacement, allows for easy exchange of faulty part without taking the whole gearbox and machine apart
- low-noise operation
- constant lubrication

## Transport

1-rotor rake is easy to transport and when stored occupies small area owing to the removable rake's arms.





# Light-weight and simple in maintenance

## Advantages of Z - 440 rakes

SaMASZ rotary rakes are characterized by unique design solutions:

- 1 Gearbox is permanently lubricated, works in oil-bath – high durability.
- 2 Tine arms secured in working arms with two linchpins - picture 1 and 2.
- 3 Height adjustment of working unit regulated in two different ways:  
- with winding handle  
- by changing the wheel axle mounting

As standard the chassis height is set for 16 cm (6 1/3"). When work is to be done on soft peat fields, the chassis height needs to be increased. Wheel axle must be turned around 180°, this will give additional 5 cm (2") of height from the ground. Wheel axle regulation is important, because it increases durability of gearbox' lower socket.



## Chassis

Not every field is even and smooth, in order to get regular and clean windrow, a perfect ground following system is indispensable. Z-440 rakes are equipped with tandem chassis as standard. Z-351 can have it on customers request.

## Tine arms

Tine arms are easy to dismount and place in its transport pockets. Raised swath curtains reduce transport and storage width.



TECHNICAL DETAILS		Z - 351*	Z - 440
	Working width [m / ft]	3,50 / 11'6"	4,40 / 14'5"
	Windrow width [m / ft]	0,80 - 1,50 / 2'7" - 4'11"	
	Transport width [m]	2,80 / 9'2"	3,60 / 11'8"
	Transport width without arms [m]	1,80 / 5'11"	2,10 / 6'11"
	Working capacity [ha/h / ac/h]	~ 3,50 / 8,70	~ 5,00 / 12,35
	Number of arms [pcs.]	9	11
	Rotor diameter with arms [m]	2,80 / 9'2"	3,60 / 11'8"
	Number of tines [pcs./arm]	3	4
	RPM**	540	
	Hitch	II	
	Power demand [HP]	from 25	from 45
	Tires (with inner tubes)	15 x 6,0 - 6	16 x 6,5 - 8
	Weight [kg / lbs]	420 / 925	750 / 1655
	PTO shaft	tractor - rake: with overload clutch	

\* Z - 301, Z - 351 - rakes with turning hitch.

\*\* Recommended drive speed during operation 300 - 350 rpm

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## Headstock

Swinging hitch eases operation on uneven fields and during turns. Front support wheel improves ground following and is available as an optional equipment. (Z - 470 as standard).





# 35 years of experience...

## ...Clean, thoroughly aerated swath

Farm's capability of producing high quality forage is one of the crucial factors to distinct modern milk and meat production technology.

Access to top quality technical equipment, conforming to high requirements is considered to be a challenge at the designing stage.

To meet these needs, we offer top quality technological solutions, based on 30-year experience in designing agricultural equipment. We will help to achieve your success!

Many have already trusted us. We are passionate about designing machines to meet any farmer's needs!





## 2-rotor rake

### TANGO 730 - one or two swath rows

Combines functionality of Z2-780 and DUO 680, making 1 or 2 swath rows. Setting carousels near the central drawbar results in single row delivery, extending them outside makes two rows. New generation, 11-arm gearbox with strengthened,

connecting-rods has been applied. Additionally, the rake has a patented „gearbox angle changing mechanism”, which provides protection to drive shafts when lifting the machine to transport position.



#### Transport

TANGO 730 is hydraulically folded-up for the transport, it facilitates driving on public roads. Transport width doesn't exceed 3,00 m / 9'10".





# 1 or 2 windrows

## Winding handle

Used for adjustment of working height.

## Gearbox position modification system

The patent pending system eliminates excessive shaft deflection and considerably increases wide-angle joints life.

## Headstock

The machine features forced steering for superior tracking around bends. The system consists of a tie rod, which is attached to the two-point headstock.

## PTO shaft as standard

## Front swath curtain

Useful when making two rows – hydraulically folded away when operating on headland.

## Hydraulic f

Hydraulic caron

## Gearbox c

New gearbox all

## Tines

The design is de  
operation even w



# Rotary rakes 2-rotor

## TANGO 730 - one or two swath rows

### Road lights

Provide safe transport on public roads.

### Stopper

Stopper limits the carousel lifting height is particularly useful when turning on headland.

### Wide wheels

For maximum stability and protection of the ground against excess pressure. Ensure maintaining constant distance between tines and the ground. Allow for performing works efficiently under any ground and weather conditions.

### Hydraulic fold-up mechanism

Carousel fold-up. Application of tension springs reduces ground pressure.

allows for quick and simple connecting-rod replacement.

developed for even more uniform tedding. Provide efficient and smooth when works are performed on a row formed of heavier plants.

Type	TANGO 730
Working width [m / ft]	6,70 - 7,30 / 22' - 24'
Transport width / height [m / ft]	3,00 / 3,90 9'8" / 12'1"
Windrow width [m / ft]	0,80 - 1,50 / 2'7" - 4'11"
Number of tine arms per rotor	11
Number of tine arms [pcs.]	4
Working capacity [ha/h / ac/h]	~ 5,60 - 7,50 / ~ 13,85
RPM*	540
Power demand [HP]	from 60
Rotor tires / Drive tires	16 x 6,5-8 / 340/55-16
Windrow presentation	on the right
Weight [kg / lbs]	2450 / 5400

\* Recommended drive speed during operation 300 - 350 rpm



**Gearbox used in TANGO 730 rake**

### Standard equipment:

- Hydraulic fold-up
- Tine loss protection
- Hydraulic swath width adjustment
- 1 or 2 windrow presentation
- Swinging hitch
- Lifting height stopper
- Working height adjustment
- Hydraulic swath curtain lifting system - on headlands
- Swath curtains
- Road lights
- Tandem chassis





## 2 – rotor center delivery rakes

Z2-780, Z2-840 - one central swath

**Two-rotor rakes features high quality of harvest. Two dimensional ground following mechanism provides cleaner raking. Z 2 - 780 model is able**

**to rake up green fodder from 7.2 up to 7.6 m (23'7"-25') Z 2 -840 from 7,6 up to 8,4 m (25' - 27'7").**

### Wheels

For maximum stability and protection of the ground against excess pressure. Ensure maintaining constant distance between tines and the ground. Allow for performing works efficiently under any ground and weather conditions.



### Gearbox

The gear with extended connecting rods to provide longer fault-free operation period. Z2-840 has the gear with bolted connecting rod bodies.



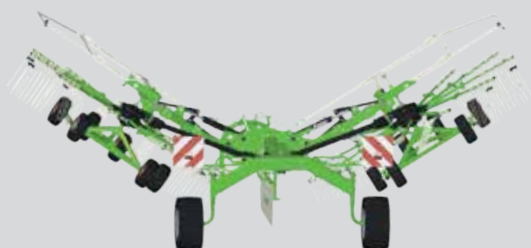
### Hydraulic fold-up mechanism

Hydraulic carousel fold-up. Support springs assistance with reduced ground pressure.



### Turning on headland

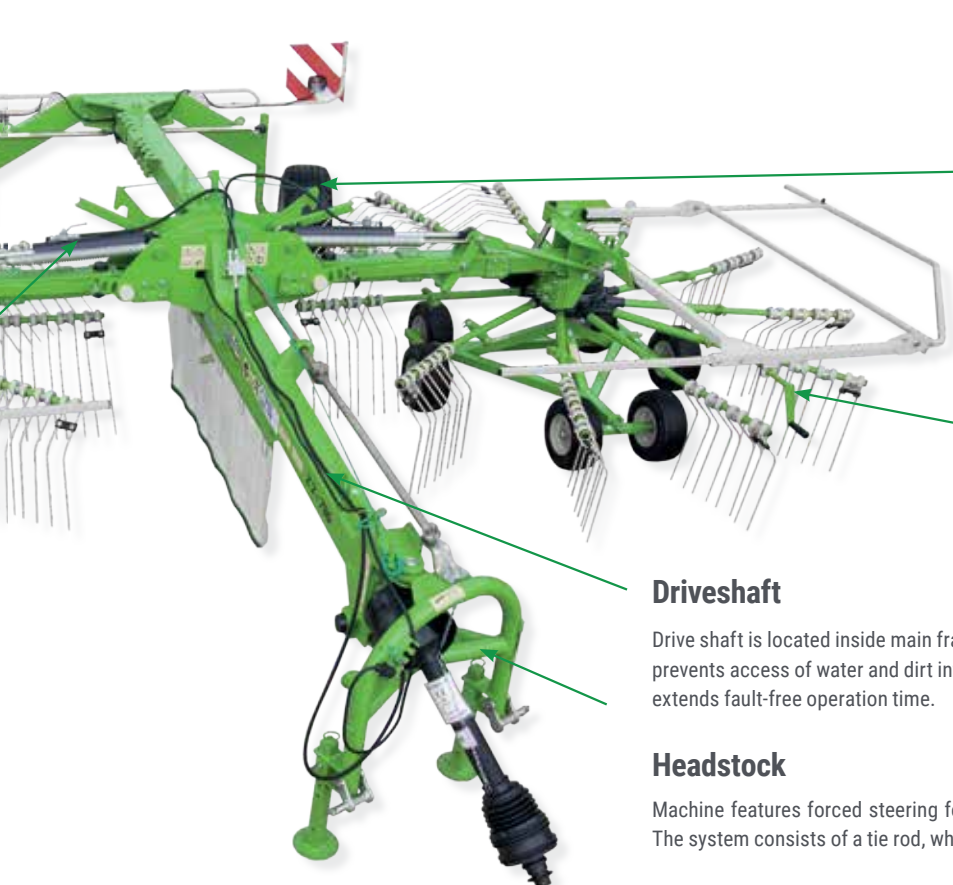
Thanks to hydraulic rotor lifting mechanism and rotor height stopper, turning on headland leaves the swath intact.







## The highest quality forage



### Stopper

Stopper limits the carousel lifting height is particularly useful when turning on headlands.



### Tines

Developed design for even more uniform tedding. Efficient and smooth operation even when working on heavier windrow.

### Driveshaft

Drive shaft is located inside main frame (SaMASZ patent). Such solution prevents access of water and dirt into the assembly, which significantly extends fault-free operation time.

### Headstock

Machine features forced steering for superior tracking around bends. The system consists of a tie rod, which is attached to the headstock.

### Transport

Rake carousels are hydraulically lifted to transport position, main frame is strong and durable. Its enables to drive on public roads. Working width does not exceed 2,9 m / 9'6".







# Lightweight and easy to use

## Working width adjustment

Manual working width adjustment mechanism. (standard in Z2-780).



Hydraulic working width adjustment mechanism. (standard in Z2-840).



## Working height adjustment

Manual working height adjustment - using a winding handle.



## Z 2-840 main differences when compared to Z2-780

- size increase
- no manual raking width adjustment, the adjustment is done only by means of hydraulic cylinders
- castor wheel chassis
- improved transverse ground following ( $\pm 8^\circ$ )
- gearboxes with quick rod replacement feature
- modernized swath curtain fold-up system
- additional width indicator
- modified working guide assemblies





**Fig. A.** Variable working width within 7.20 and 7.60 m (23'7"-25'), Z2-840 (7,60 - 8,40 / 25' - 27'7") range. Adjustment is possible only in transport position by inserting a pin.

**Fig. B.** Facilitated maneuvering owing to forced steering system. A simple mechanism transmits hitch torsion onto rear wheels' tie rod.

## Two dimensional ground following

Each rotor uses three tandem chassis. Longitudinal and transverse ground following mechanism ensures perfect ground following and results in very clean fodder or hay harvest. Other advantages of Z2-780 rakes are the same as for Z 410 rakes - see page 7.

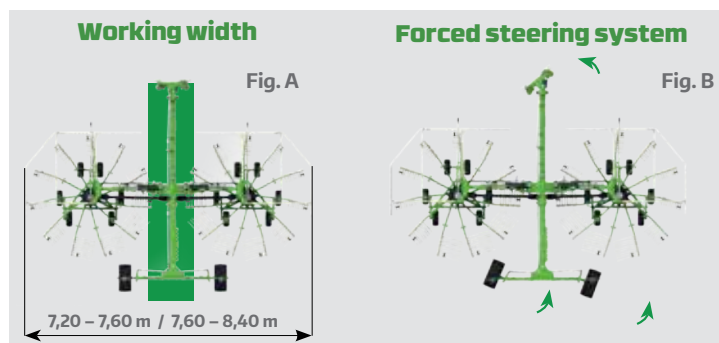
Z2-780 rakes is a bright exception in the class of rakes with widths up to 7.6 m (25') as compared with other manufacturers. Main features are not only transverse and longitudinal ground following, but also a triple tandem running gear per single rotor.



Z2-780: a-5°, b-5°, c-15°, d-5°



Z2-840: a-8°, b-6°, c-25°, d-8°



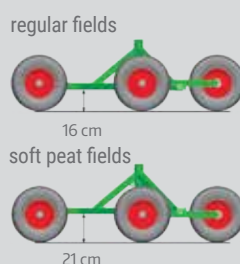
Type	Z2 - 780	Z2 - 840
Working width [m / ft]	7,20 - 7,60 / 23'7" - 24'11"	7,60 - 8,40 / 24'11"-27'7"
Windrow width [m / ft]	1,50 - 2,00 / 4'11" - 6'7"	1,20 - 2,00 / 3'11"-6'7"
Transport width / height [m / ft]	2,90 / 3,00 9'6" / 9'10"	3,00 / 3,75 9'8" / 12'3"
Number of arms per rotor [pcs.]	11	11
Number of dismountable arms per rotor for transport [pcs.]	4	4
Working capacity [ha/h / ac/h]	~ 8,00 / 20,00	~ 9,00 / 22,00
RPM*	540	540
Power demand [HP]	from 60	from 80
Tires	16 x 6,5-8 / 340/55-16	
Weight [kg / lbs]	2040 / 4500	2330 / 5130

\* Recommended drive speed during operation 300 - 350 rpm

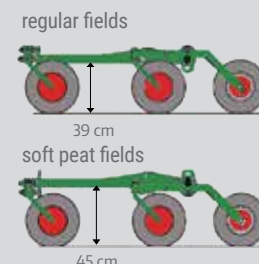
## Running gear height regulation

Additional height increase can be done by turning wheel axle around (180°). It enables comfortable work on soft peat fields.

Z2-780



Z2-840







# Basket rake

## TWIST 600

**TWIST 600 is a center delivery rake designed for a fast, efficient and clean raking of forage. It can be mounted to the front or rear of the tractor. With front mounting, you can simultaneously rake and work, e.g. with a baler. The rake consists of two**

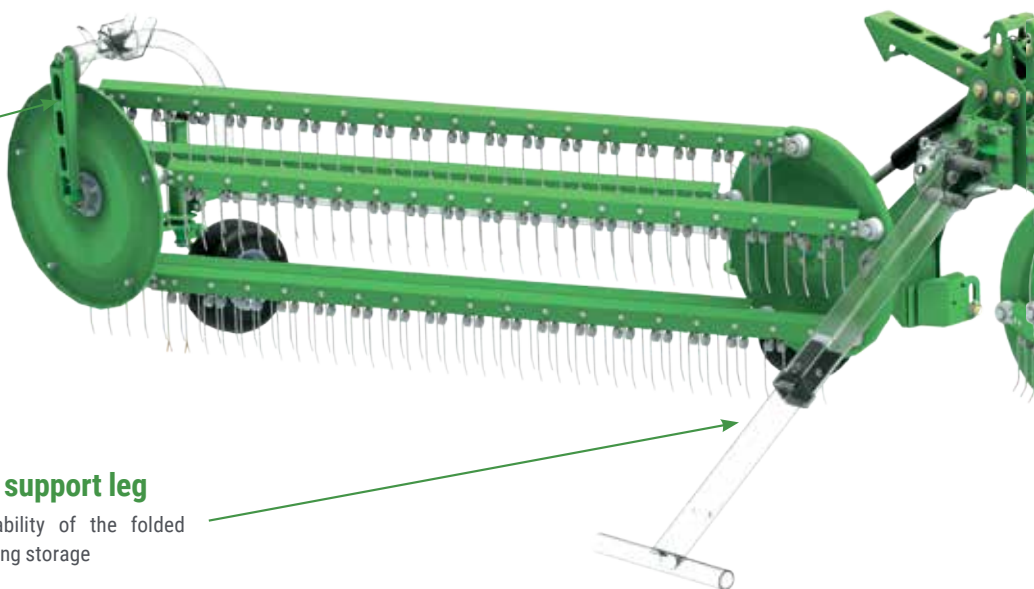
**working systems driven by tractor's hydraulics using hydraulic motors. The machine does not need the tractor's PTO shaft for operation. The rake has low weight in comparison to its extensive working width.**

### Swing arm

Ensures smooth operation of the system, which prolongs bearing life.

### Foldable support leg

provides stability of the folded machine during storage



### Transport

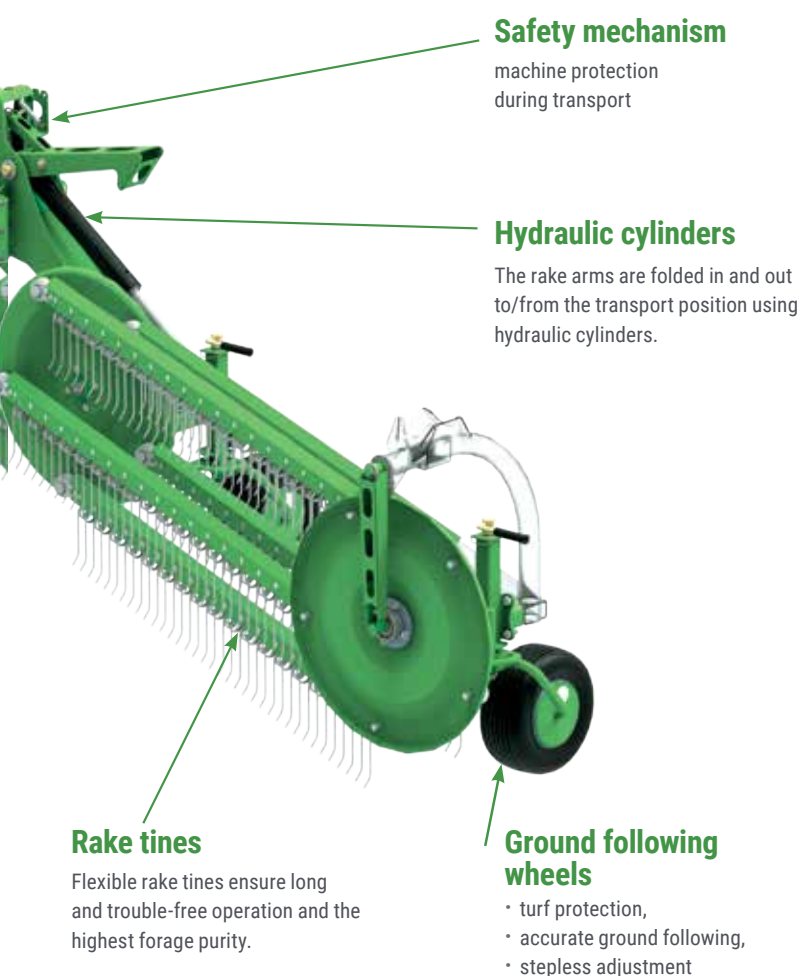
The rake is folded and unfolded to/from the transport position using hydraulic cylinders.







The rake has low weight in comparison to its extensive working width.



Type	TWIST 600
Working width [m / ft]	6,00 / 19'9"
Windrow width [m / ft]	1,30 / 4'4"
Transport width / height [m / ft]	2,35 / 3,50 - 7'7" / 11'5"
Working drums [pcs.]	2
Raking bar [pcs.]	10
Tines [pcs.]	18
Working capacity [ha/h / ac/h]	~ 6,00 / 15,00
Drive type	hydraulic
Pump capacity [GPM]	7
Nominal pressure [bar / MPa]	160 / 16
Hitch	II
Power demand [HP]	from 80
Wheels	15 x 6,5
Weight [kg / lbs]	770

\* Recommended drive speed during operation 300 - 350 rpm

### Standard equipment:

Hydraulic drive with rotation speed regulation • Regulation of working height • Foldable support leg • Mechanical transport lock • Regulated ground following wheels • KENNFIX hydraulic connector

### Additional equipment:

- warning plate and road lights bracket with drawbar  
 - support wheel for rear hitch  
 - anti-winding cover



## Selected SaMASZ machines

extension arms



drum mowers



disc mowers



rotary rakes and tedders





## Electrophoretic cathode metal coating (KTL) - the way for a long surface life

Cathodic painting is used to coat elements that require coatings with significant corrosion resistance. Painting workpieces of SaMASZ machines is carried out on a fully automated line with a total length of 900 m. Each stage of the process is constantly monitored and recorded, which ensures the repeatability of the process as well as the highest quality of the coatings obtained.

The technology is always individually tailored to the characteristics of the workpiece and meets restrictive standards. Zinc phosphate surface preparation and KTL painting allow even the most complicated shapes with hard to reach workpiece slots to be covered. Such a coating guarantees the highest anti-corrosion resistance, which is more than 3 times higher than in the case of the standard iron phosphating.

This is extremely important, as it allows for a perfect surface finish. A well-equipped laboratory helps to monitor process parameters and coating quality, which translates into high resistance to weather conditions, corrosion, chemical and mechanical protection and aesthetic appearance.



### Advantages:

- high quality of the coating,
- covering complex shapes,
- precise control of the coating thickness,
- corrosion protection,
- chemical protection,
- mechanical protection.

## flail mowers



## snow plows



## tractor gritters and sweepers





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**True passion and constant seeking of the best solutions are amongst the ideas, which have been essential for the SaMASZ employees and have become the key to the company's success.**

What contributes the most to constant and dynamic development of the company are close contact with our customers and staying open to their needs. Thanks to dialogue with our present and future clients and trying to meet their expectations we create and strengthen up the basis of our dynamic success. We are creating the brand, which is already well recognized not only in the whole Europe, but also in the world.

Considering constant development as our top priority, we invest in product research. Our employees are the most talented Technical University graduates, who are not only experts in their own fields, but also bring in a great dose of

Your dealer:

professionalism and passion to their duties. You can always count on their competence and reliability.

Today, SaMASZ is the top Polish and one of the major European manufacturers of forage machinery. Our offer includes more than 300 types of different machines: drum mowers, disc mowers, tedders, rakes, flail mowers, extension arms or snow plows. We export to more than 50 countries around the world. Our sales network includes approx. 60 companies in Poland and approx. 70 abroad.

Our main goal, which is constant development and implementation to our production cutting edge technology in order to keep the world's top quality. We are fully aware, that in this ever changing reality, customers tend to seek trading partners who are trustworthy, and therefore we have an ambition of being considered as a reliable and professional manufacturer.



Technical data and equipment provided herein, as well as images of the products may be different due to constant technical development.