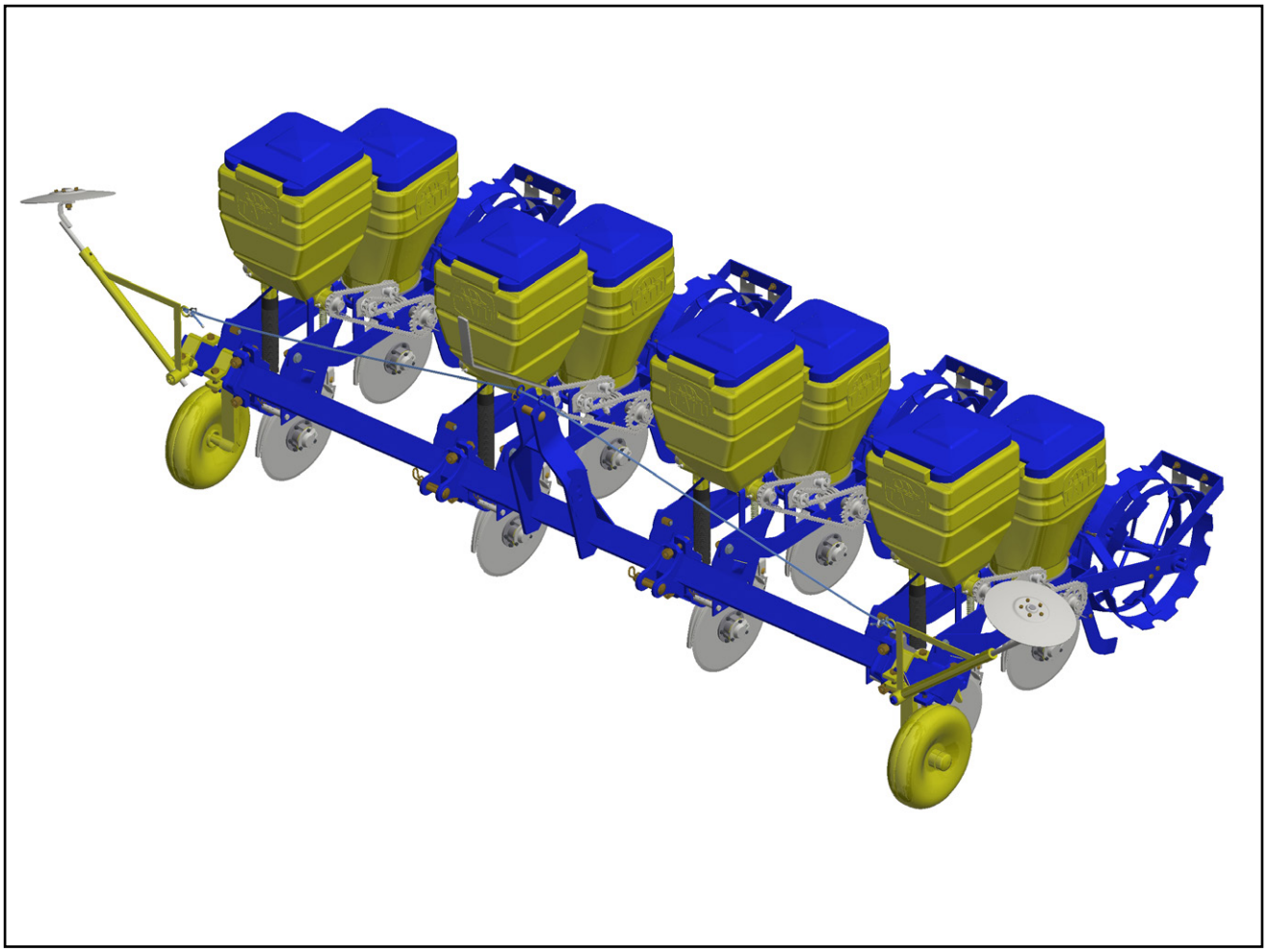
TATU MARCHESAN

INSTRUCTIONS MANUAL



T²SI

IDENTIFICATION

Dealer: _____

Owner: _____

Firm / Farm: _____

City: _____ State: _____

No. of the Certificate of Guarantee: _____

Serial / No.: _____

Date: ____ / ____ / ____ Invoice No.: _____

Product: _____

Notes: _____

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Introduction

The T²SI planter features quality, efficiency, low cost, easy operation and low maintenance.

It was designed to plant great grains such as: corn, soybean, rice, beans, sorghum, cotton with linter/delinted, peanut and so on.

The T²SI planter has industrial-type chains. It has a reduced weight, less length on the row units and fertilizer hoppers with total weight over the frame. These advantages result on a greater flexibility of the moving parts that works over the soil, allowing them to follow the surface irregularities.

The seed metering system use horizontal seed plates, mounted over the dosing hoppers, allowing the plantation of grains with several sizes.

The fertilizer metering system uses individual coil pitch augers and the amounts are obtained through the sprocket combinations, thus offering uniformity on every outlet tubes.

This instructions manual contains the necessary information for the best performance of this planter. The operator must carefully read the entire manual before working with the equipment. Also, read and understand the safety recommendations.

For any further clarification or in the event of technical problems that may arise during the service, consult your dealer and the Technical Support department of the factory. They can ensure the fully functioning of your TATU planter.

TATU
MARCHESAN

Table of contents

To the owner

The acquisition of any TATU product assures to the original purchaser the following rights:

• Warranty certificate;

• Instructions manual;

• Technical assistance by the dealer on equipment delivery.

However, the owner must check the condition of the equipment on delivery, as well as knowing the warranty terms.

Special attention should be given to the safety recommendations, operation precautions and maintenance of the equipment.

The instructions in this manual indicates how to get the best performance and allow the operator to get maximum income, increasing the equipment lifetime.

This manual should be read by operators and maintenance staff.

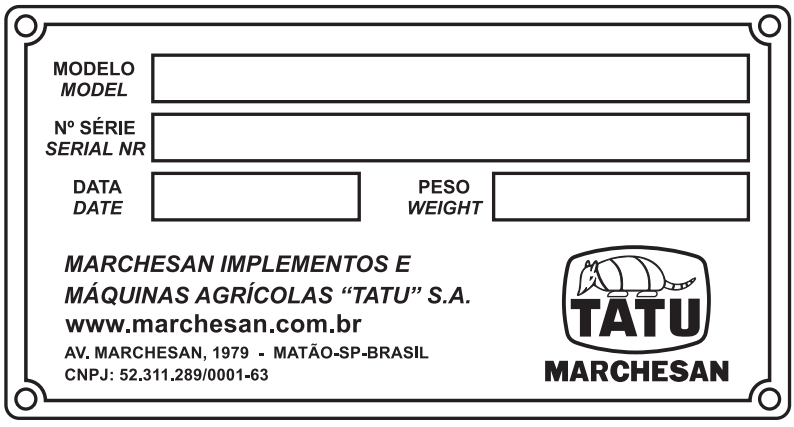
Important

- **Only people who own a full knowledge of the tractor and equipment must operate them;**
- **Marchesan is not responsible for any damage caused by accident on transporting, incorrect utilization or inadequate storage, either by negligence and/or lack of experience from any person;**
- **Marchesan is not responsible for any damage caused by unpredictable situations or the incorrect use of the equipment.**

General information

Right and left hand side indication are made observing the equipment from the rear.

To order any parts or request technical assistance services, it is required to provide the data contained on the nameplate, which is located on the equipment frame.



NOTE

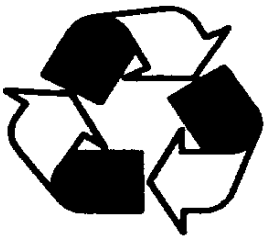
The warranty shall not be applied to any equipment, or any parts thereof, which has been altered elsewhere than at the place of manufacture or which the original purchaser thereof, at retail, has used or allowed to be used parts, not made or supplied by Marchesan S/A.

To the operator

Be careful with the environment

Dear user!

Respect the ecology. Do not throw trash away. This gesture of goodwill helps to protect our environment.



Products such as oil, fuel, filters, batteries and others are spilled to the soil and can penetrate to the underground layers, compromising nature. Ecological and conscious disposal of them should be done.

Working safely

- **Security aspects must be carefully observed to avoid accidents.**
- **This symbol is a warning used to prevent accidents.**
- **The instructions under this symbol refers to the safety of the operator or third parties, therefore they should be carefully read and observed.**

The T²SI mounted row crop planter is simple to operate, requiring however the basic and essential cautions to its handling.

Always keep in mind that safety requires constant attention, observation and prudence during the transportation, maintenance and storage.

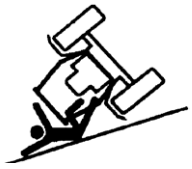
Read and understand the information before making any adjustment or maintenance.

Have extreme caution when operating with the power take-off (PTO). Do not get closer during operation.

To the operator

Never use your bare hands to check hydraulic leaks, the high pressure can cause injuries.

Never attempt to change the adjustments, clean or lubricate the equipment when the same is switched on or in movement.



Be careful while driving on slopes. Risk of overturn.

Prevent that chemical products (i.e.: fertilizers, treated seeds) make any contact with your skin or clothes.

Keep access and work places clean or free from oil and grease. Risk of accidents.

Never transport the equipment on highways or paved roads during the night. Avoid that the tractor wheels touch the drawbar in sharp turns.

The presence of any other people on the tractor or equipment is stricly forbidden.

Have extreme caution when driving under electrical power lines. Any contact may result in severe shocks, injuries or death.

For your protection and safety, always wear adequate clothes and footwear while operating the equipment.

Always use the safety locks to carry out maintenance operations and to transport the equipment.

To the operator

- Only trained and qualified personnel are allowed to operate the equipment.
- While working or during transportation, only the presence of the operator is allowed on the tractor.
- Do not allow children to play or to get over the equipment while it is operating, during transportation or storage.
- Have full knowledge of the soil before starting to work. Use the speed which is suitable to the conditions of the ground. Provide the delineation of obstacles or hazardous locations.
- Use personal protective equipment (PPE).
- Wear appropriate clothes and footwear. Avoid clothes that are either loose or hanging from the body, which may become entangled in moving parts.
- Never operate the equipment without its **protective devices**.
- Wear protection gloves to work near the disc blades.
- Be careful while hitching the equipment to the tractor.
- When lifting or lowering the planter, check if there are no people or animals close or under the equipment.
- Never attempt to change the adjustments, clean or lubricate the equipment while it is moving.
- In case of emergency, know how to stop the tractor and planter quickly.
- Always shut down the engine, remove the key and use the handbrake before leaving the tractor seat.
- Only drive the equipment using a tractor with appropriate power.
- Carefully check the transport width on narrow locations.
- Whenever you unhitch the equipment, either in the field or shed, do it on a flat and firm surface and use the parking stands. Make sure the equipment is properly supported.
- Please check the general safety instructions on the back cover of this manual.

Transportation over truck or trailer

Marchesan does not advise the equipment traffic on highways, because this practice involves serious security risks in addition to being prohibited by the current existing traffic law. The transportation for long distances should be done on truck, trailer or other by following these safety guidelines:

- Use adequate ramps to load or unload the equipment. Do not make the loading on ditch banks, as it may cause a serious accident.

- When lifting with a hoist, use the appropriate points to lift.

- Underpin the equipment wheels appropriately.

- Use chock blocks and safety chains to secure the equipment to the truck or trailer during the transport.

- After 8 to 10 km transporting, please inspect the load condition. Repeat this procedure every 80 to 100 km. Give more attention when transporting the equipment on rough roads, slopes and other adverse conditions.

- Always be careful with the load height, especially when passing under electrical power lines, bridges and others.

- Check all laws and regulations regarding the height limits and load width while transporting the equipment to the truck or trailer. If necessary use banners, lights and other devices in order to give adequate warning to the other drivers.

Safety stickers

The safety stickers warn about the equipment points that require more attention and they should be kept in good repair. If these stickers become damaged or illegible, replace them. Marchesan provide stickers, upon request and indication of the respective serial number.

05.03.03.1428

05.03.03.1827

Sticker set

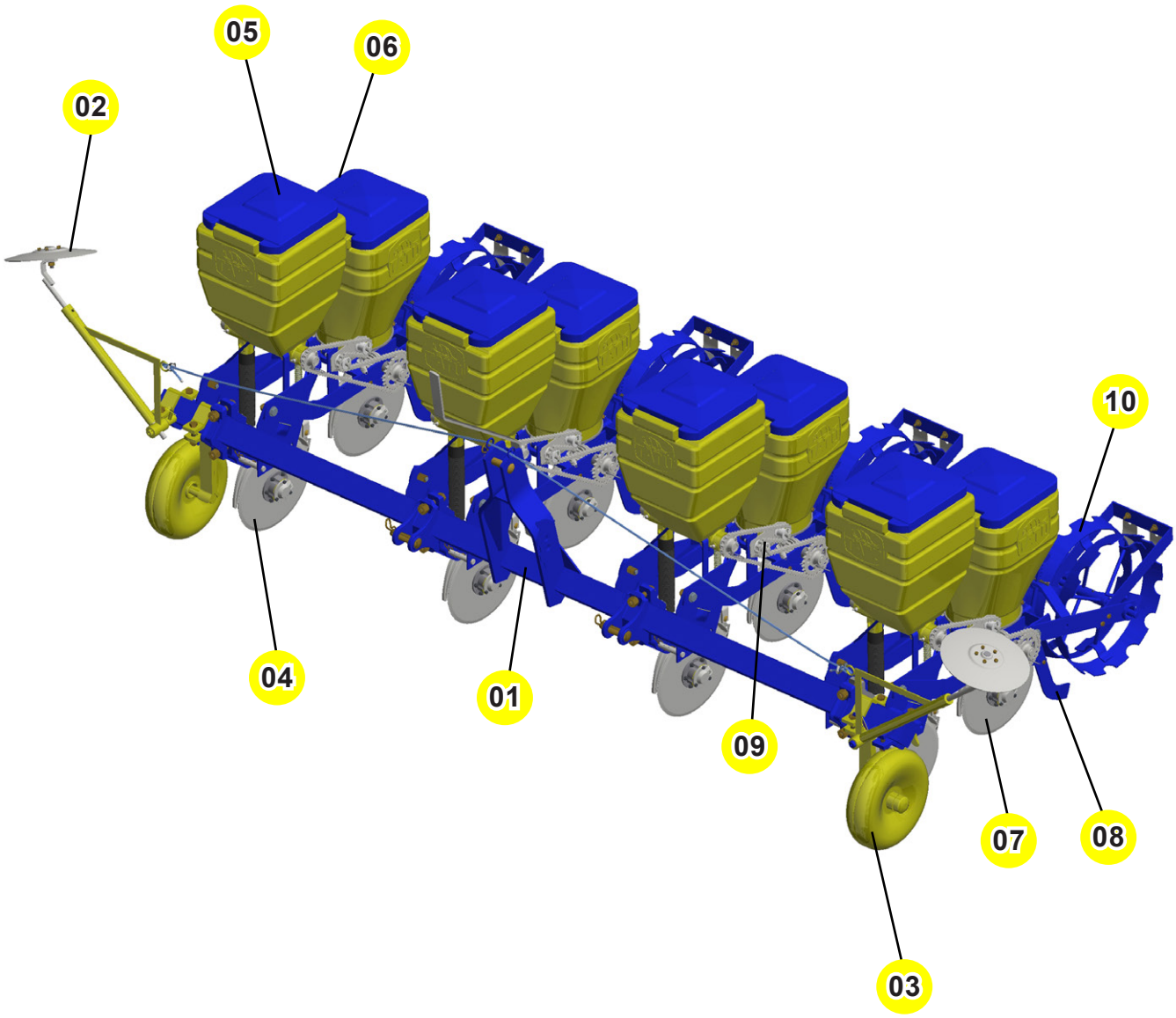
Model	Serial number
T²SI	**05.03.06.0846**

Model	T²SI										
Frame	1800		2800			3200			3600		
Number of row units	02	03	03	04	05	04	05	06	04	05	06
Maximum spacing (mm)	1350	700	1100	800	600	900	700	550	1050	800	600
Minimum spacing (mm)	450										
Weight (kg)	384	504	534	656	752	675	793	917	684	802	926
Tractor required (cv)	50		60			70		75	70		75
Hitch type	Category II - Three-point hitch										

Components

01 - Frame
02 - Row marker discs
03 - Iron wheel
04 - Fertilizer double disc
05 - Fertilizer hopper
06 - Seed hopper
07 - Seed double disc
08 - Fixed coverers
09 - Transmission with industrial chains
10 - Iron compaction wheels

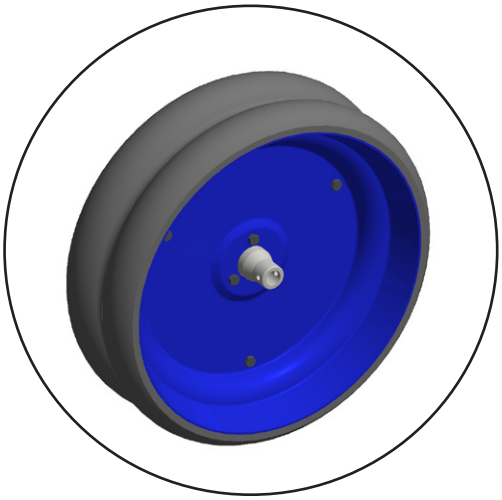
Optional parts: Check page 41 to 45.

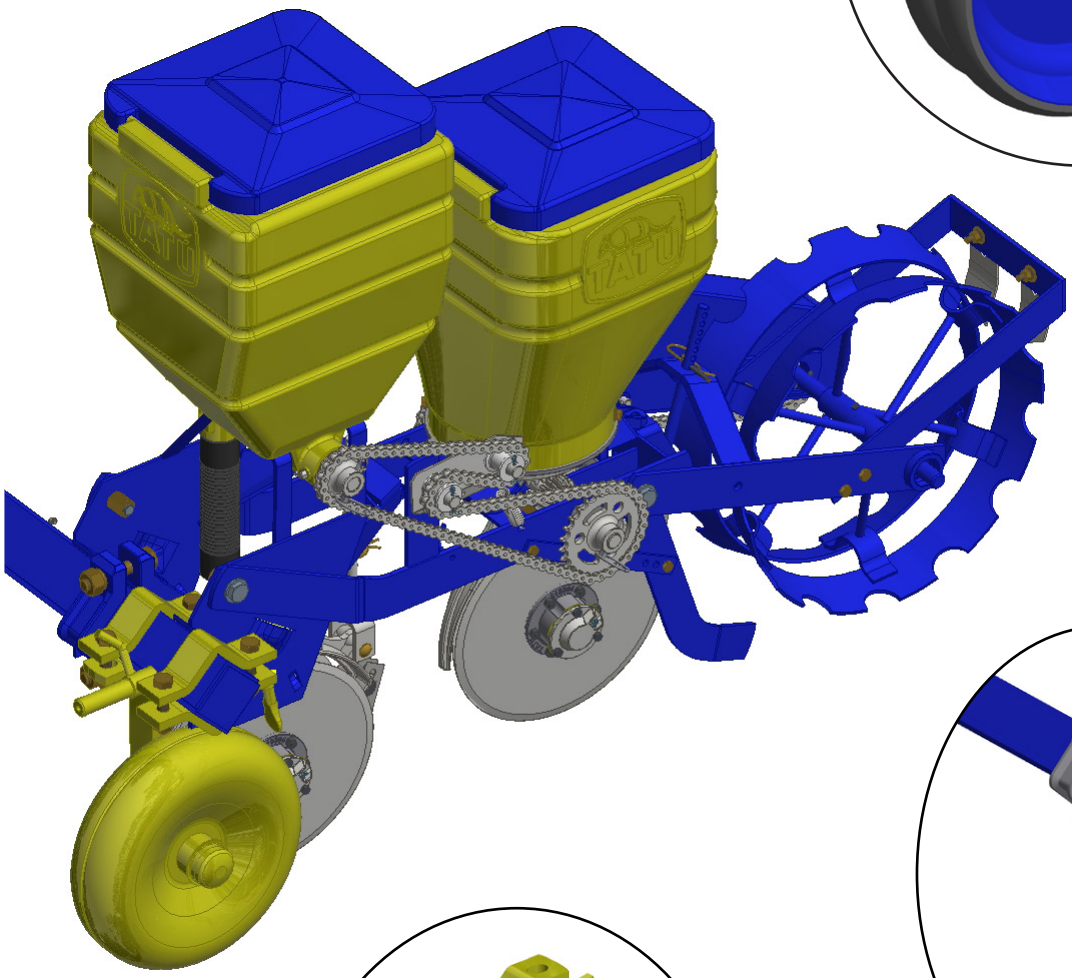


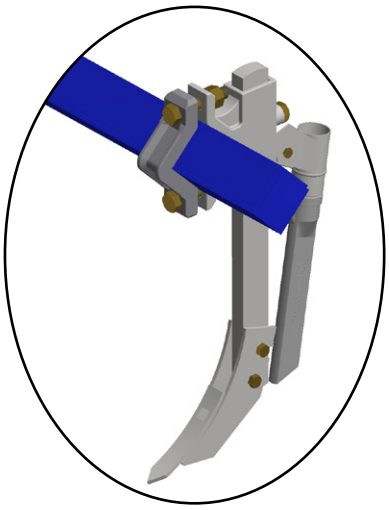
Row unit versions

Version with supporting/compaction wheels and furrower shank

- Supporting wheel made of iron or rubber.
- Compaction wheel made of iron or rubber.
- Double disc or furrower shank for the fertilizer.







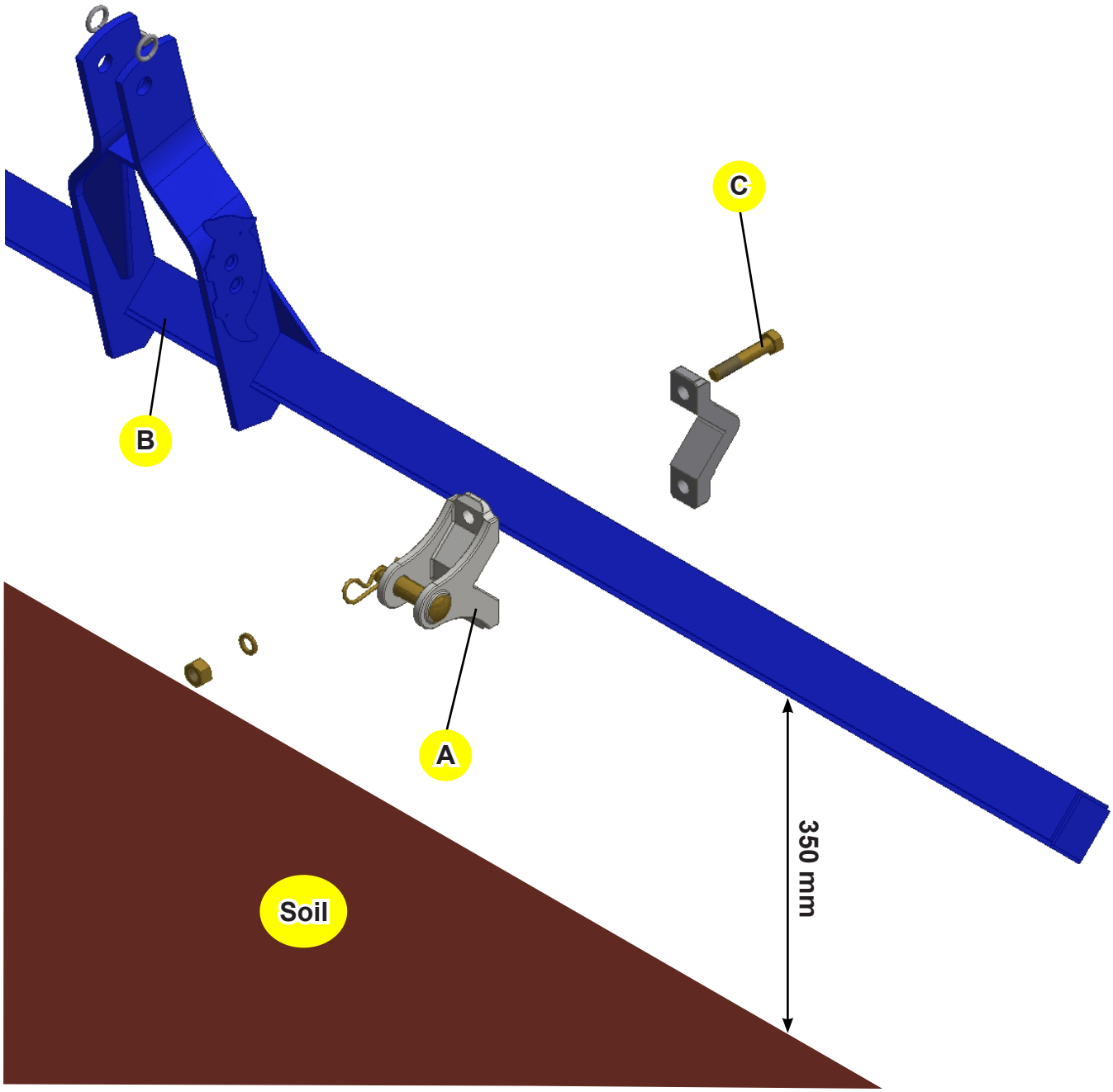
Assembly

To facilitate transportation, the planters leave the factory semi-assembled, being necessary the placement of a few components, according to the instructions below:

• Choose a clean place and check the parts using the list that comes inside the package.

• Place the hitches (A) of the lower hydraulic arms of the tractor to the frame (B) using bolts (C), spring washers and nuts, without totally tightening them.

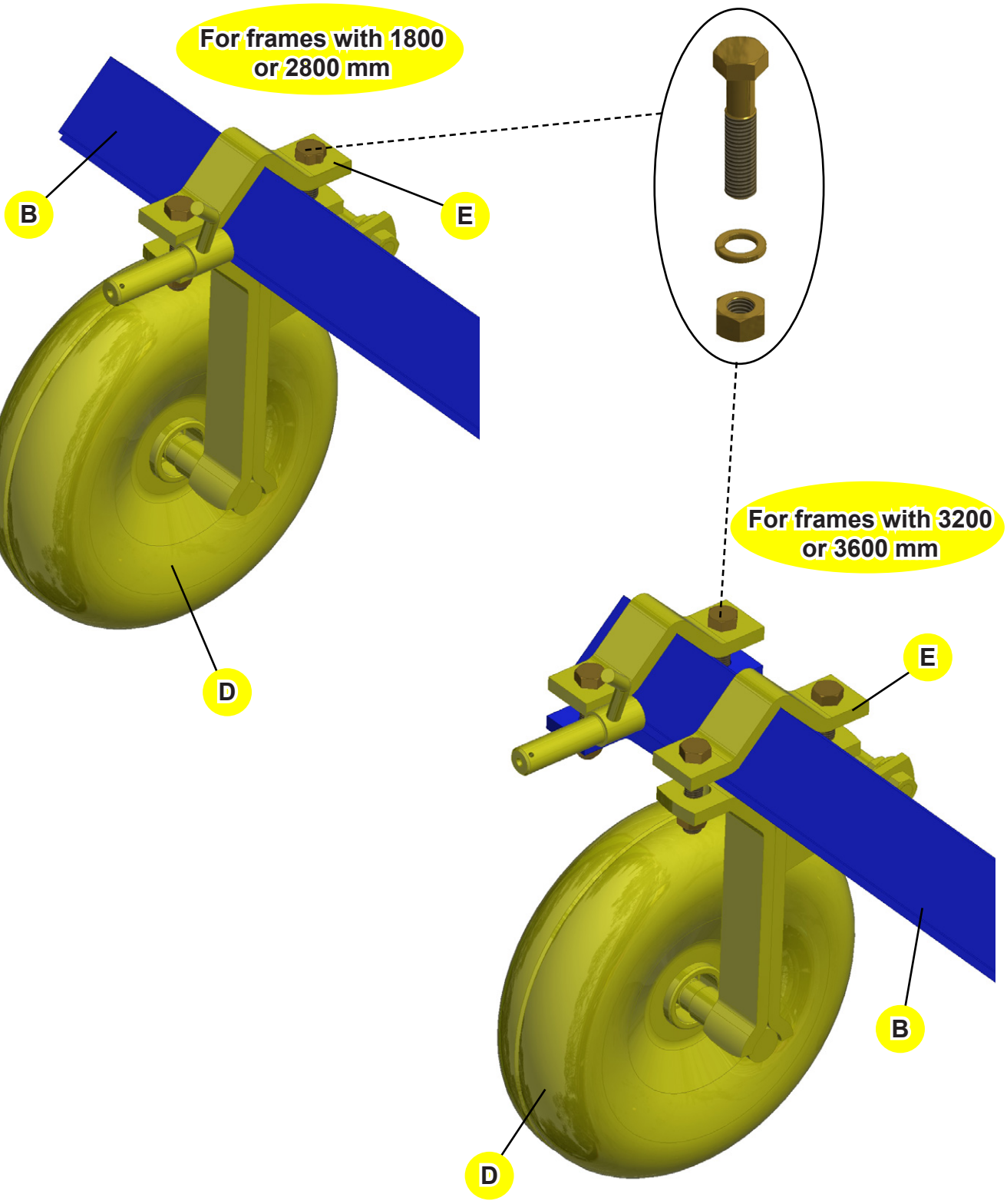
• Couple the frame (B) to the three-point hitch of the tractor, leaving it suspended for approximately 350 mm.



Assembly

• For frames with 1800 or 2800 mm, fasten the supporting wheels (D) on the frame (B) ends using the supports (E), bolts, spring washers and nuts.

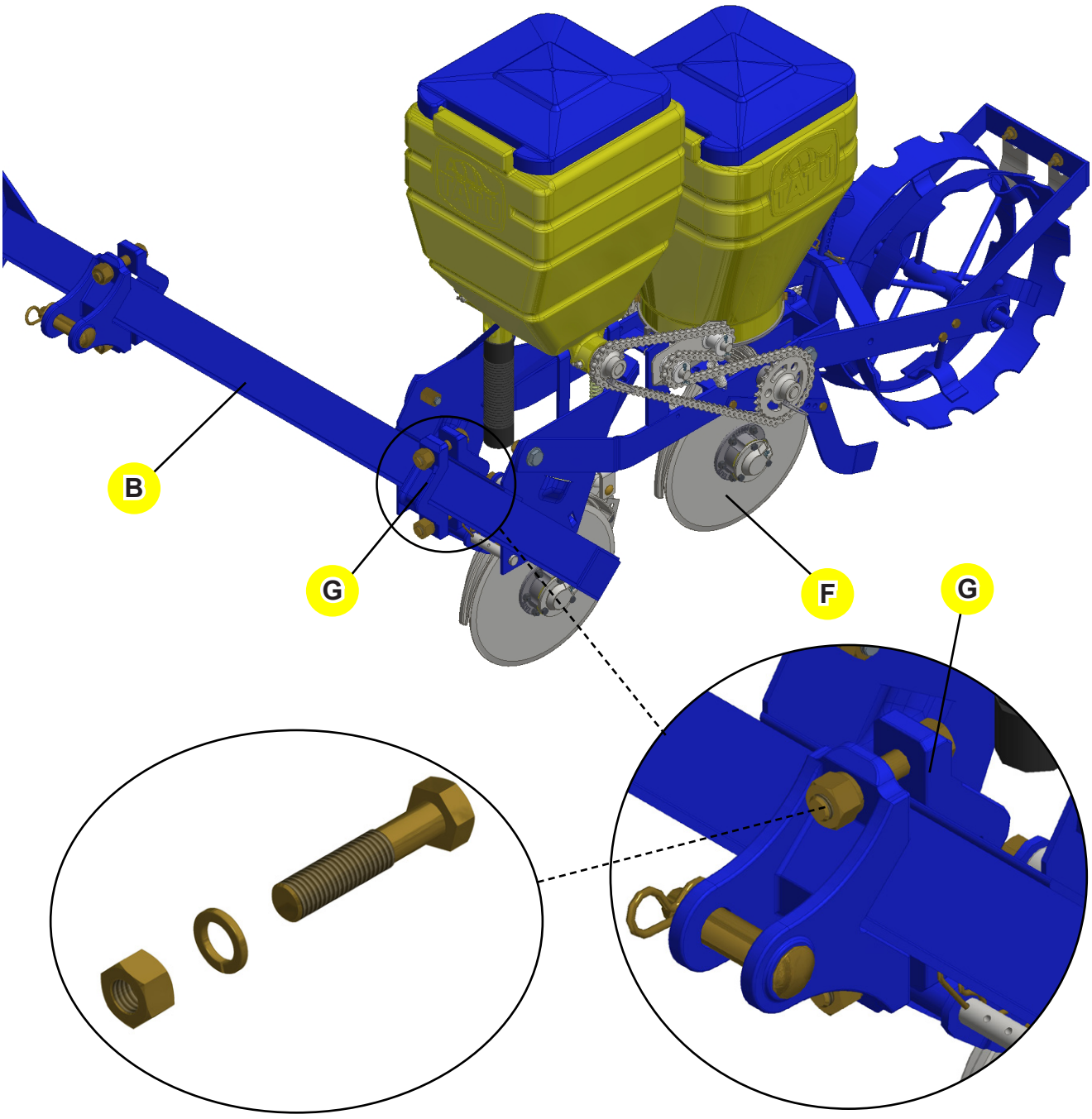
• For frames with 3200 or 3600mm, the supporting wheels are independent, thus they can be assembled either on the end of the frame as well as between the row units, depending on the number of row units and spacing that is being used.



• Couple the row units (F) on the frame (B) using a hitch guide fastener (G), bolts, spring washers and nuts.

NOTE **When the row units are equipped with a furrower shank, the hitch guide fasteners are different.**

Check the correct placement of even/odd row units on page 16.



• Then, fasten the marker support (H) using flat washers and cotter pins. The arms (I) are assembled on the support and locked using bolts (J).

NOTE **For frames with 3200 or 3600 mm, the row markers are independent from the supporting wheels.**

• Lastly, fasten the rope (K) to the marker supports using clamps.

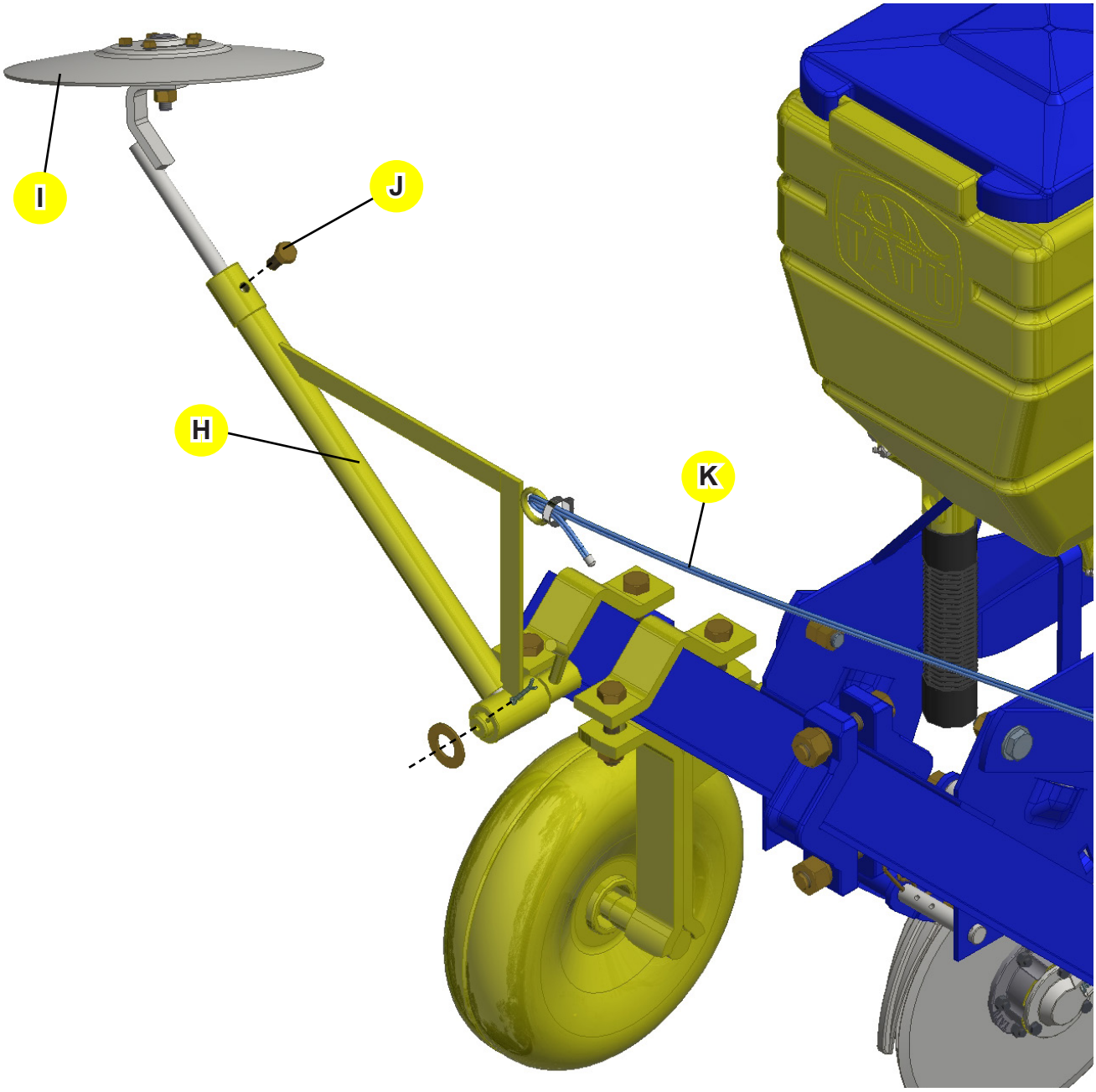
Rope dimensions:

Ø 3/8" x 4700 mm for the frame with 1800 mm;

Ø 3/8" x 5700 mm for the frame with 2800 mm;

Ø 3/8" x 6100 mm for the frame with 3200 mm;

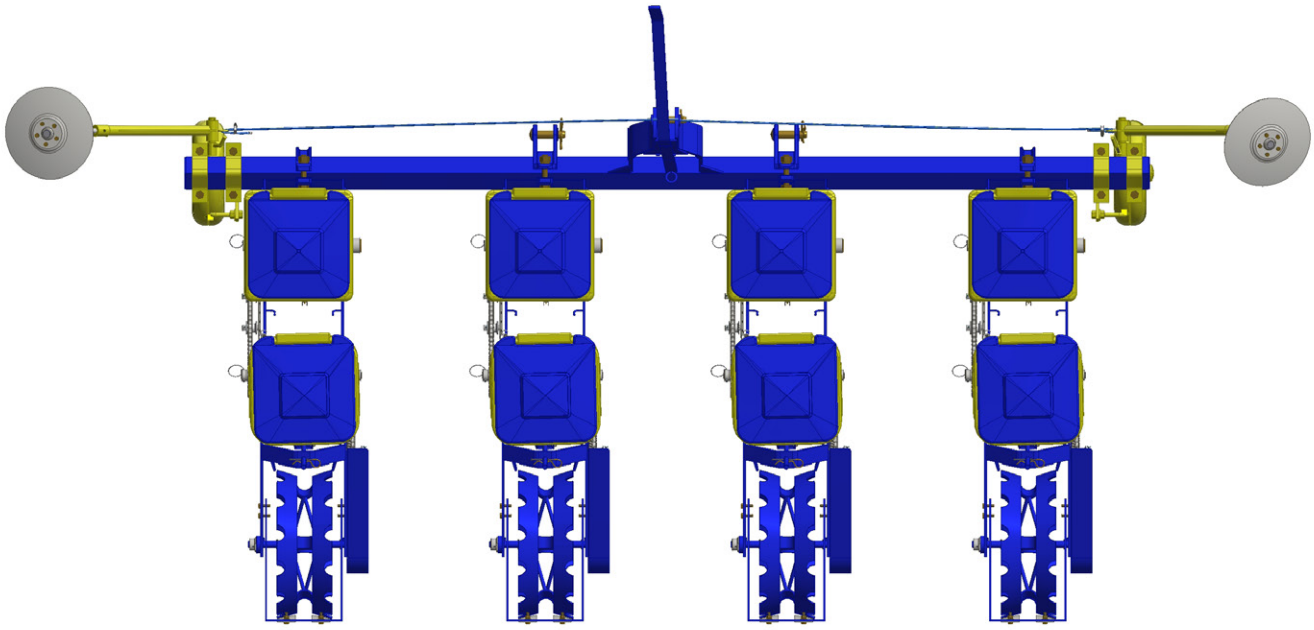
Ø 3/8" x 6500 mm for the frame with 3600 mm.



Positioning the row units on the frame

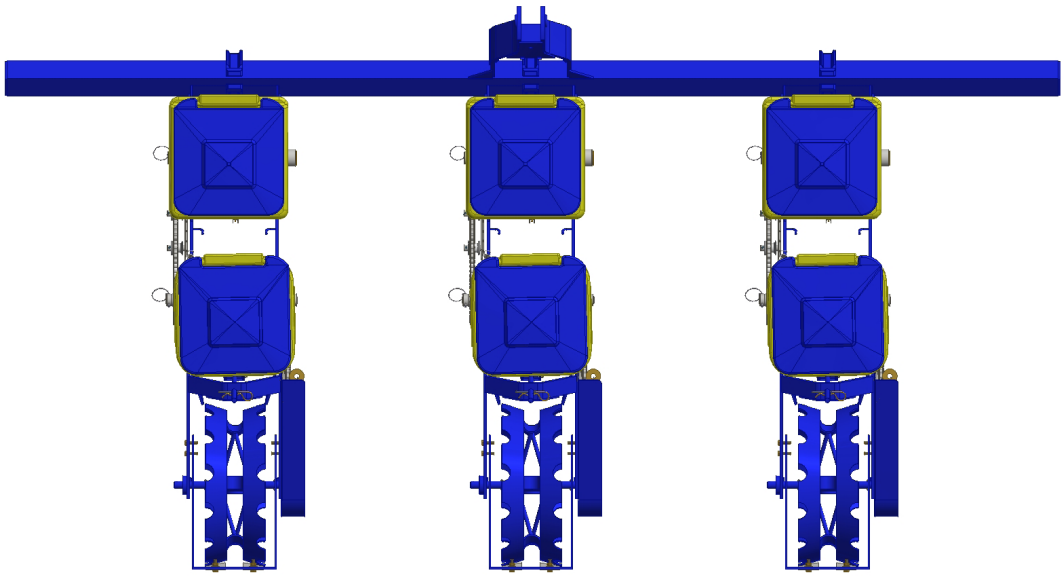
Even number of row units:

Set the frame center and measure half of a spacing to the right and half to the left, placing on these points the first two row units; from these rows, set the other ones with one spacing to each side.



Odd number of row units:

Place one row unit in the frame center and set the other ones with the desired spacing.



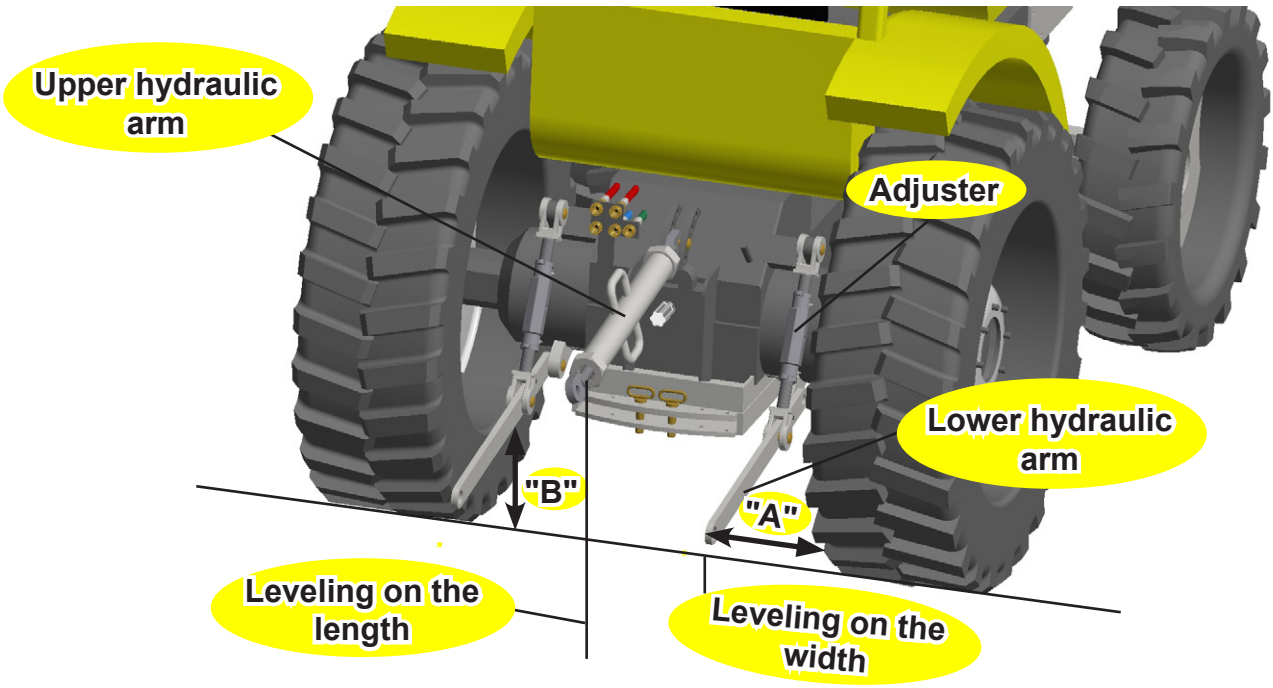
Preparing the tractor

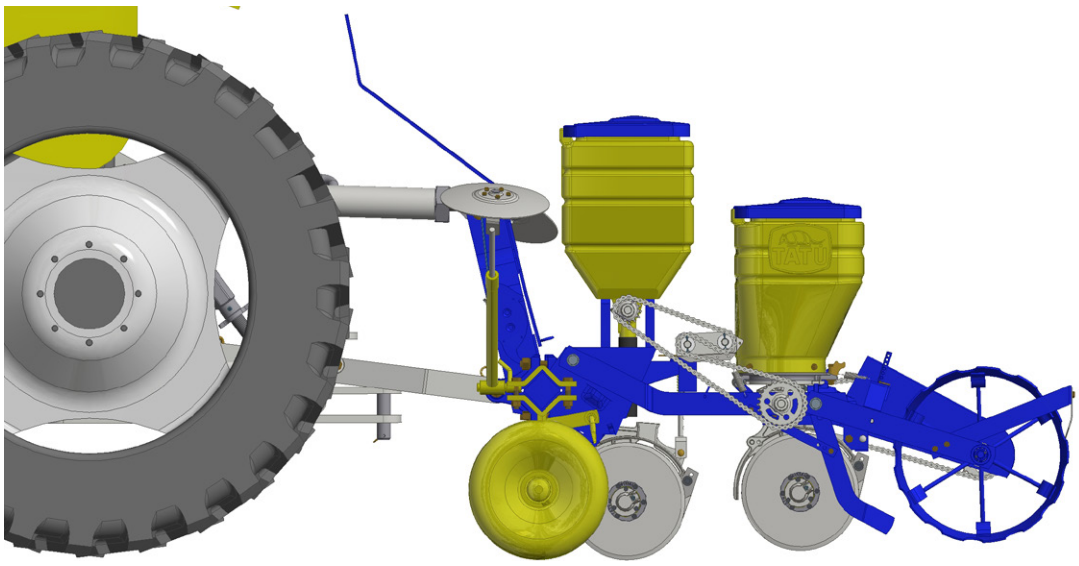
- It is recommended to use counterweights on the front part of the tractor.
- Adjust the front and rear gauges to have the same opening (tires center).

Centralizing and leveling the planter

To facilitate the adjustments, the planter must be centralized with the tractor, which is done as follows:

- Place the tractor and planter on a flat place.
- Align the planter drawbar with the tractor third point.
- Totally lift the planter.
- Check if the distances between the lower arms and tires are equal on both sides (as in "A"), being both of them leveled (as in "B").
- Level the equipment through the upper arm (third point).





Setting the planter to transport position

• Totally lift the planter to activate the hydraulic system.

NOTE

- **It is recommended to fill up the planter on the working place only to avoid overloads to the hydraulic lift system during the transportation.**
- **Do not pull the planter if it has a load excess.**

Procedures before the plantation

• Before starting the plantation, make a general inspection on the equipment. Retighten all bolts and nuts and check the condition of all pins and cotter pins, avoiding future damages. Repeat this operation after the first day of work.

• Also check if there is no strange object inside the hoppers, which may damage the metering mechanisms.

• Lubricate all grease fittings appropriately. (See lubrication instructions on page 46).

Ideal working speed

• T²SI planter works with higher efficiency from 5 to 7 km/h.

ATTENTION **Keep a constant speed during the whole job.**

Set-up instructions

Correct seed rate

Consider that the amount of plants in the harvest is always smaller than the number of seeds distributed in the planting operation, due to the following factors: germination rate, plagues, diseases and others.

Therefore, we recommend the distribution of some more seeds related to the plants/ hectare that is wanted to obtain on the crop.

The following table shows the number of corn seeds that must drop in 10 meters on every row unit, considering different spacings and different amount of seeds per hectare.

Auxiliary table for corn

Number of seeds/ hectare	Spacings				
	75 cm	80 cm	85 cm	**90 cm**	95 cm
45,000	34	36	38	40	43
50,000	38	40	42	45	47
55,000	41	44	47	49	52
60,000	45	48	51	**54**	57
65,000	49	52	55	58	62
70,000	53	56	59	63	66

Example: When planting 60,000 corn seeds with a spacing of 90 cm, an average of 54 seeds per 10 linear meters must drop on every row unit.

Graphite powder use

The graphite powder must be mixed to the seeds that are already treated and dry to make its flow and unloading easier, noticeably improving the distribution. The use of graphite reduce the damage rate on the seeds and increase the life time of the metering systems.

Amount of graphite per kilogram of seed			
Planter distribution system:	Seeds treated with insecticide		
	Small and round	Big and round	Flattened
Horizontal seed plates	04 grams	02 grams	04 grams

Recommendations:

• The graphite should not be combined before the seed treatment.

• The graphite should not be combined to the insecticide to apply in the seeds.

• For non-treated seeds, use only half of the graphite mentioned on the previous page.

• For treated seeds, clean the metering mechanism at least once a day.

List of standard seed plates in the planter

Seed plate	Amount of holes	Hole diameter	Thickness	Serial number
For corn	28 holes	Ø 9 mm	4.5 mm	05.03.03.2127
For beans	40 slots	9 x 14 mm	5.5 mm	05.02.02.0407
Blind	-	-	5.5 mm	05.03.03.1678

ATTENTION **The amount of seed plates that are included with the planter corresponds to the number of row units.**

Optional seed plates list on page 41.

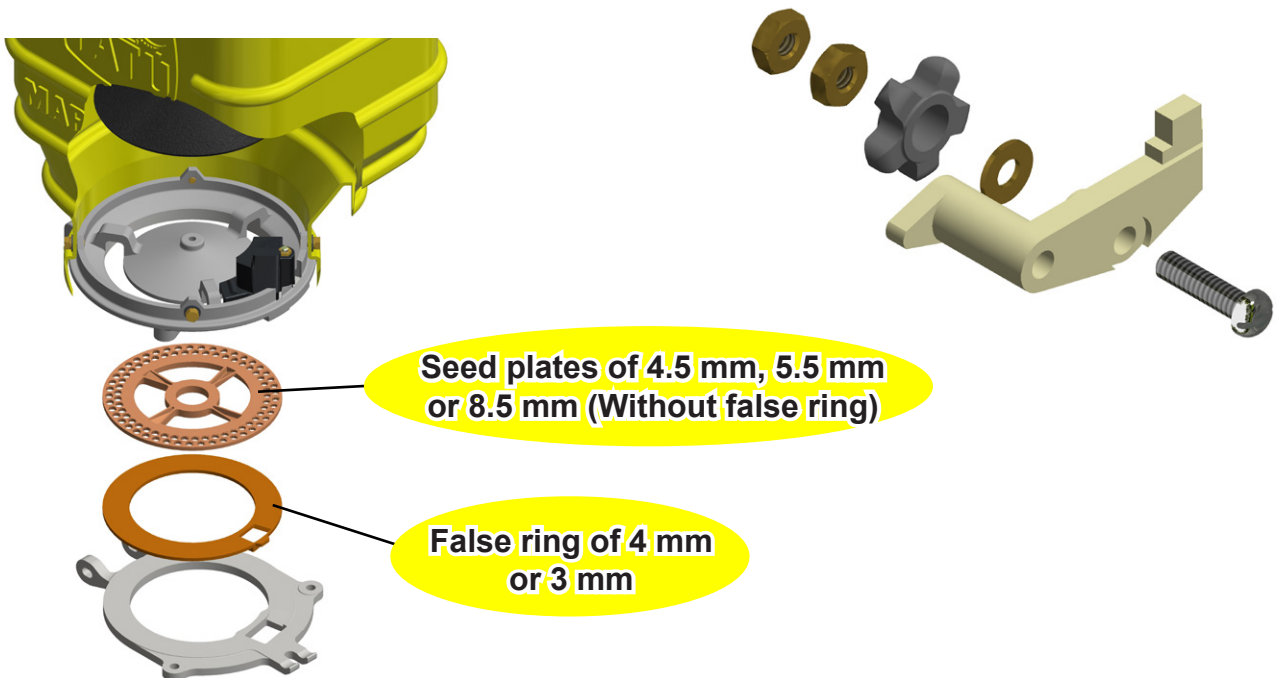
NOTE

• The available height for the placement of the plate plus the false ring is 8.5 mm, however:

If a plate has a thickness of 4.5 mm, the false ring must have 4 mm.

To use a plate that has a thickness of 5.5 mm, place a false ring of 3 mm.

Do not put a false ring if a plate that has 8.5 mm of thickness is used.

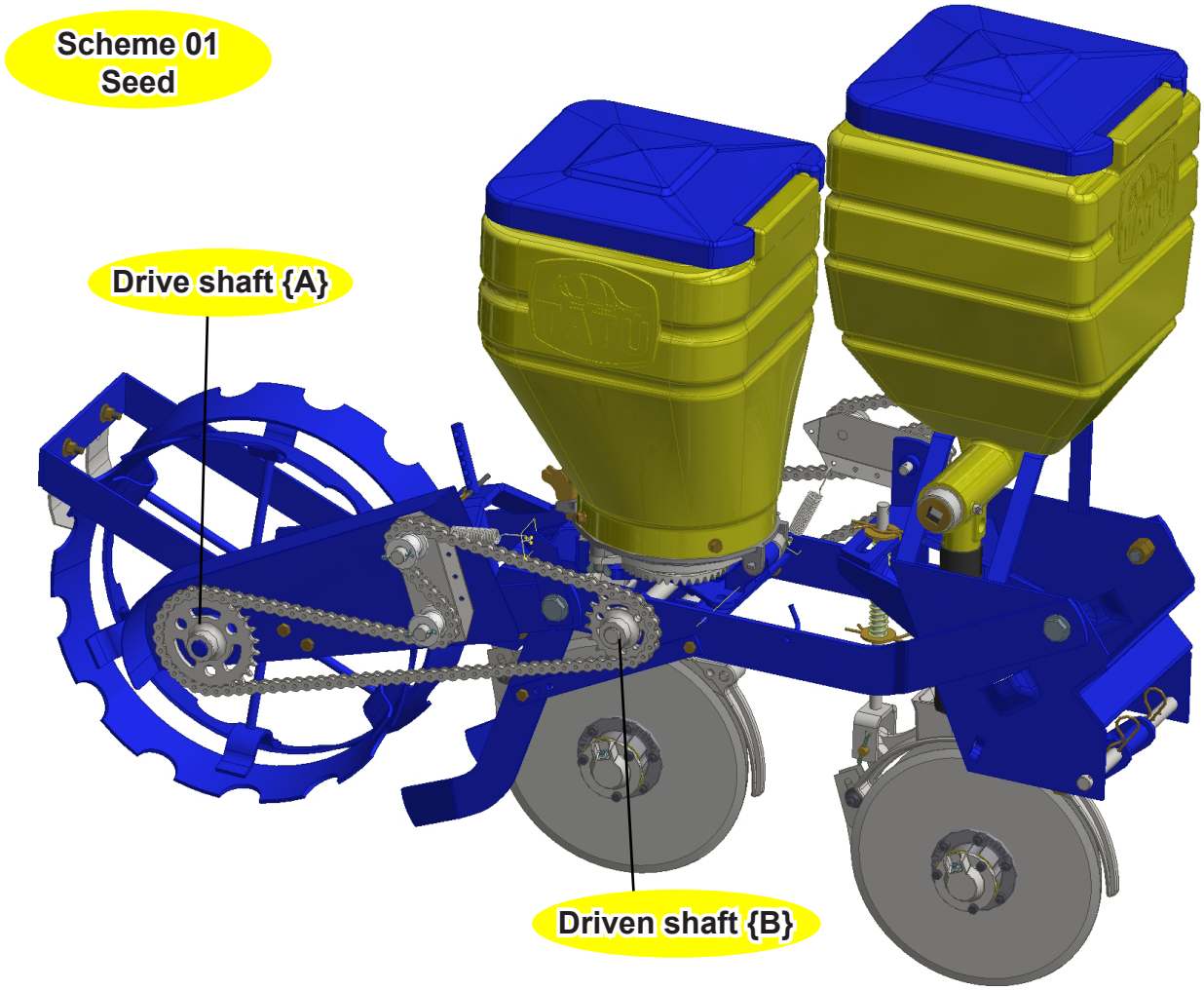


Seeds distribution

The seed distribution is done through slotted seed plates that are horizontally positioned.

The amount and size of the holes/slots and the thickness of the seed plates can vary according to the grain size and the desired plant amount.

Adjust the seed rate per linear meter through the sprocket combinations of the Drive shaft **{A}** and Driven shaft **{B}** (Scheme 01).



IMPORTANT

The following pages show the different amount of seeds distributed to many crops, according to the sprocket combinations.

Note that the table for the corn seed plates considers 10 (ten) linear meters.

The correct seed plate matching to the used seeds is very important. Define the seed plate holes previously using seeds that are already treated and with graphite.

Never combine seeds of different sizes.

CORN (Standard seed plate)

For planting corn:

Serial number **05.03.03.2127** - Seed plate with a thickness of 4.5 mm and 28 holes of Ø 9 mm, for flattened/short sieves.

01 (one) seed per hole is being considered.

Variation of the number of seeds per 10 linear meters according to the used sprockets.

NOTE

Use a false ring with a thickness of 4 mm.

- **16-teeth sprocket provided as an optional. (See page 42).**

T²SI Drive / Driven	Number of seeds in 10 linear meters
14 x 30	30
14 x 26	35
14 x 22	41
18 x 26	45
14 x 18	50
26 x 30	56
22 x 22	65
26 x 22	76
22 x 18	79
18 x 14	84
30 x 22	89

SOYBEAN (Standard seed plate)

For planting soybean:

Serial number **05.02.02.0407** - Seed plate with a thickness of 5.5 mm and 40 slots of 9 x 14 mm.

02 (two) seeds per slot are being considered (medium/big seeds).

Variation of the number of seeds per meter according to the used sprockets.

NOTE

Use a false ring with a thickness of 3 mm.

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	9
14 x 26	10
14 x 22	12
18 x 26	13
14 x 18	14
26 x 30	16
22 x 22	18
26 x 22	22
22 x 18	23
18 x 14	24
30 x 22	25
26 x 18	27
30 x 18	31

SOYBEAN (Standard seed plate)

For planting soybean:

Serial number **05.02.02.0407** - Seed plate with a thickness of 5.5 mm and 40 slots of 9 x 14 mm.

03 (three) seeds per slot are being considered (medium/big seeds).

Variation of the number of seeds per meter according to the used sprockets.

NOTE

Use a false ring with a thickness of 3 mm.

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	13
14 x 26	15
14 x 22	18
18 x 26	19
14 x 18	22
26 x 30	24
22 x 22	28
26 x 22	33
22 x 18	34
18 x 14	36
30 x 22	38
26 x 18	40
30 x 18	46

BEAN (Standard seed plate)

For planting bean:

Serial number **05.02.02.0407** - Seed plate with a thickness of 5.5 mm and 40 slots of 9 x 14 mm.

01 (one) seed per slot is being considered.

Variation of the number of seeds per meter according to the used sprockets.

NOTE **Use a false ring with a thickness of 3 mm.**

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	4
14 x 26	5
14 x 22	6
18 x 26	6
14 x 18	7
26 x 30	8
22 x 22	9
26 x 22	11
22 x 18	11
18 x 14	12
30 x 22	13
26 x 18	13
30 x 18	15

BEAN (Optional seed plate)

For planting bean:

Serial number **05.02.02.0333** - Seed plate with a thickness of 5.5 mm and 34 slots of 10 x 16.5 mm.

02 (two) seeds per slot are being considered.

Variation of the number of seeds per meter according to the used sprockets.

NOTE **Use a false ring with a thickness of 3 mm.**

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	7
14 x 26	8
14 x 22	10
18 x 26	11
14 x 18	12
26 x 30	14
22 x 22	16
26 x 22	19
22 x 18	19
18 x 14	20
30 x 22	21
26 x 18	23
30 x 18	26

SORGHUM (Blind plate - standard)

For planting sorghum:

Bore the blind seed plate (**05.03.03.1678**) to make 40 holes that allows 2 (two) seeds passing in each hole.

Variation of the number of seeds per meter according to the used sprockets.

NOTE **Special pulley provided as an optional part. (See page 42).**

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	7
14 x 26	8
14 x 22	10
18 x 26	11
14 x 18	12
26 x 30	14
22 x 22	16
26 x 22	19
22 x 18	19
18 x 14	20
30 x 22	21
26 x 18	23
30 x 18	26

SOYBEAN (Optional seed plate)

For planting soybean:

Serial number **05.02.02.0565** - Seed plate with a thickness of 5.5 mm and 90 holes of Ø 9 mm.

01 (one) seed per hole is being considered.

Variation of the number of seeds per meter according to the used sprockets.

NOTE **Use a false ring with a thickness of 3 mm.**

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	10
14 x 26	11
14 x 22	13
18 x 26	14
14 x 18	16
26 x 30	18
22 x 22	21
26 x 22	25
22 x 18	26
18 x 14	27
30 x 22	28
26 x 18	30
30 x 18	35

SOYBEAN (Optional seed plate)

For planting soybean:

Serial number **05.02.02.0564** - Seed plate with a thickness of 5.5 mm and 100 holes of Ø 7 mm.

01 (one) seed per hole is being considered.

Variation of the number of seeds per meter according to the used sprockets.

NOTE **Use a false ring with a thickness of 3 mm.**

T²SI Drive / Driven	Number of seeds per linear meter
14 x 30	11
14 x 26	12
14 x 22	15
18 x 26	16
14 x 18	18
26 x 30	20
22 x 22	23
26 x 22	27
22 x 18	28
18 x 14	30
30 x 22	32
26 x 18	33
30 x 18	39

Calculation of the amount of seeds/meter for the seed plates

The amount of seeds for every seed plate can be found by making the calculation below, which has a factor for every sprocket combination (scheme 01).

T²SI Drive / Driven	Factor*
14 x 30	0.1204
14 x 26	0.1389
18 x 30	0.1548
14 x 22	0.1642
18 x 26	0.1787
22 x 30	0.1892
14 x 18	0.2007
18 x 22	0.2112
22 x 26	0.2184
26 x 30	0.2236
22 x 22	0.2581
30 x 26	**0.2978**
26 x 22	0.3050
22 x 18	0.3154
18 x 14	0.3318
30 x 22	0.3519
26 x 18	0.3728
22 x 14	0.4055
30 x 18	0.4301
26 x 14	0.4793
30 x 14	0.5530

*** These factors represent the amount that the seed plate turns at every linear meter.**

How to calculate:

Factor **x** Number of holes on the plate **x** Number of seeds on each hole **x** slippage index (+ or - 10%, which is expressed by 0.90).

Example:

30 x 26 combination and a seed plate with 90 holes, 1 (one) seed for each hole.

Calculation:

0.2978 x **90** x **1** x **0.90 = 24.12** - approximately **24 seeds** for every meter.

Make the calculation using different factors and find the combination that distributes the desired amount of seeds using the chosen seed plate.

Fertilizer distribution

The fertilizer distribution is done through the individual coil pitch augers and the different amount are obtained through the **Drive {C}** and **Driven {D}** sprockets. (Scheme 02).

The definition of the sprockets of the **Scheme 02 (Fertilizer)** is done after the ones on the **Scheme 01 (Seed)** has been defined. Consult the tables on the following pages to check the used combinations to apply different amounts of fertilizer, having spacings that goes from 450 to 900 mm.

NOTE

Note that the fertilizer table is divided on 06 pages and considers the previously established combinations.

Thus, when using a combination of:

14 x 30, 14 x 26, 14 x 22; consult page 27.

Using:

18 x 26 or 14 x 18; consult page 28.

Using:

26 x 30 or 22 x 22; consult page 29.

Using:

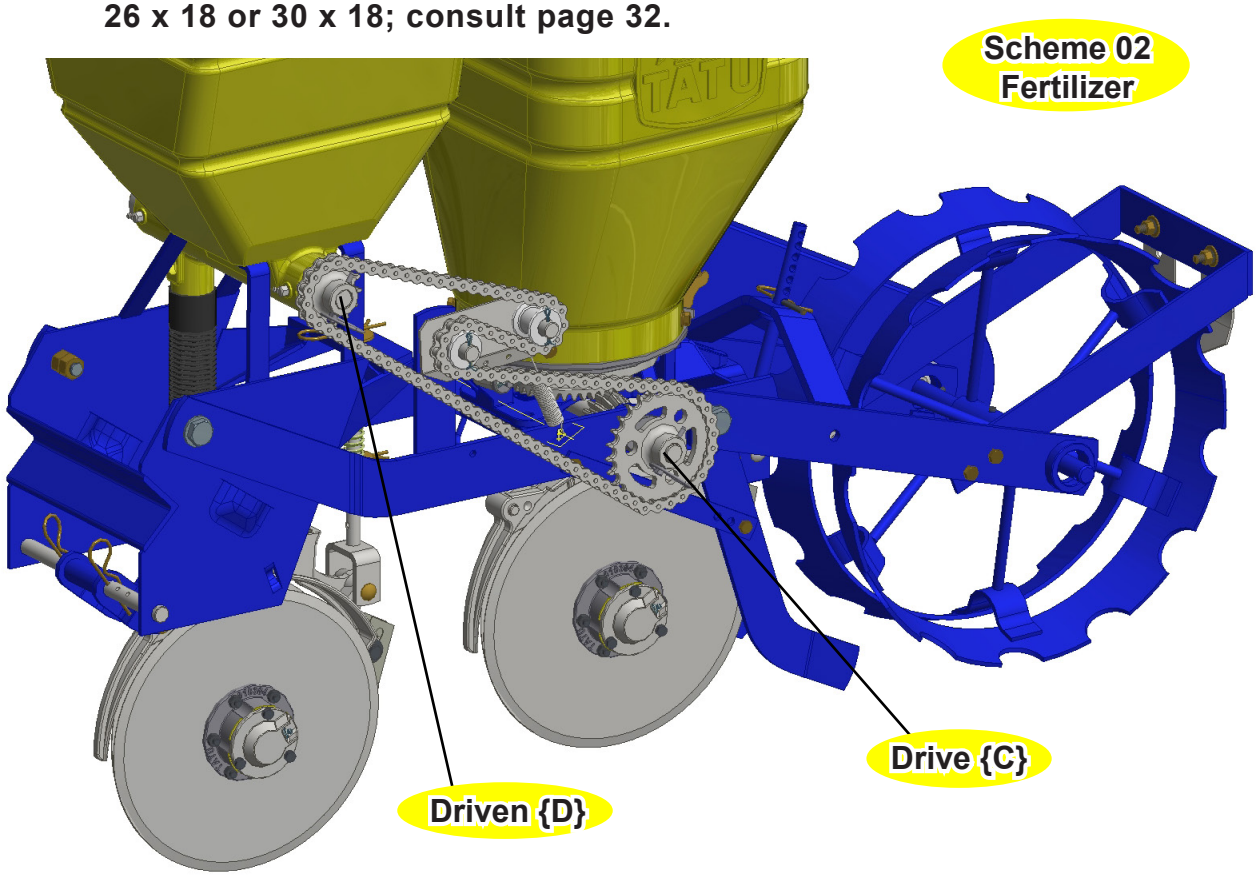
26 x 22 or 22 x 18; consult page 30.

Using:

18 x 14 or 30 x 22; consult page 31.

Using:

26 x 18 or 30 x 18; consult page 32.



T²SI		Grams on 50 linear meters for each row unit	Granulated commercial fertilizer distribution table - T²SI									
Scheme 1	Scheme 2		Amount of kg/hectare for the different spacings between row units (mm).									
Seeds Drive/Driven	Fertilizer Drive/Driven		450	500	550	600	650	700	750	800	850	900
14 x 30	18 x 26	326	145	130	119	109	100	93	87	82	77	72
14 x 30	22 x 26	385	171	154	140	128	118	110	103	96	91	86
14 x 30	18 x 22	399	177	160	145	133	123	114	106	100	94	89
14 x 30	22 x 22	471	209	188	171	157	145	135	126	118	111	105
14 x 30	26 x 22	557	248	223	203	186	171	159	149	139	131	124
14 x 30	22 x 18	576	256	230	209	192	177	165	154	144	136	128
14 x 30	26 x 18	680	302	272	247	227	209	194	181	170	160	151
14 x 26	18 x 30	326	145	130	119	109	100	93	87	82	77	72
14 x 26	22 x 30	399	177	160	145	133	123	114	106	100	94	89
14 x 26	18 x 22	445	198	178	162	148	137	127	119	111	105	99
14 x 26	22 x 22	544	242	218	198	181	167	155	145	136	128	121
14 x 26	22 x 18	664	295	266	241	221	204	190	177	166	156	148
14 x 26	30 x 22	742	330	297	270	247	228	212	198	186	175	165
14 x 26	30 x 18	905	402	362	329	302	278	259	241	226	213	201
14 x 22	18 x 30	385	171	154	140	128	118	110	103	96	91	86
14 x 22	18 x 26	445	198	178	162	148	137	127	119	111	105	99
14 x 22	22 x 30	471	209	188	171	157	145	135	126	118	111	105
14 x 22	18 x 22	526	234	210	191	175	162	150	140	132	124	117
14 x 22	22 x 26	544	242	218	198	181	167	155	145	136	128	121
14 x 22	26 x 30	556	247	222	202	185	171	159	148	139	131	124
14 x 22	22 x 22	643	286	257	234	214	198	184	171	161	151	143
14 x 22	30 x 26	742	330	297	270	247	228	212	198	186	175	165
14 x 22	26 x 22	760	338	304	276	253	234	217	203	190	179	169
14 x 22	22 x 18	785	349	314	285	262	242	224	209	196	185	174
*14 x 22	**30 x 22**	876	389	350	319	292	270	250	234	219	206	**195**
14 x 22	26 x 18	928	412	371	337	309	286	265	247	232	218	206
14 x 22	30 x 18	1071	476	428	389	357	330	306	286	268	252	238

NOTE *** To distribute approximately 200 kg of fertilizer per hectare using a spacing of 900 mm and considering the already established combination of 14 x 22 for the seeds (Scheme 1), use a combination of 30 x 22 for the fertilizer (Scheme 2).**

T²SI		Grams on 50 linear meters for each row unit	Granulated commercial fertilizer distribution table - T²SI									
Scheme 1	Scheme 2		Amount of kg/hectare for the different spacings between row units (mm).									
Seeds Drive/Driven	Fertilizer Drive/Driven		450	500	550	600	650	700	750	800	850	900
18 x 26	14 x 30	326	145	130	119	109	100	93	87	82	77	72
18 x 26	18 x 30	419	186	168	152	140	129	120	112	105	99	93
18 x 26	14 x 22	445	198	178	162	148	137	127	119	111	105	99
18 x 26	22 x 30	512	228	205	186	171	158	146	137	128	120	114
18 x 26	14 x 18	544	242	218	198	181	167	155	145	136	128	121
18 x 26	18 x 22	571	254	228	208	190	176	163	152	143	134	127
18 x 26	22 x 22	699	311	280	254	233	215	200	186	175	164	155
18 x 26	22 x 18	854	380	342	311	285	263	244	228	214	201	190
18 x 26	18 x 14	898	399	359	327	299	276	257	239	225	211	200
18 x 26	30 x 22	953	424	381	347	318	293	272	254	238	224	212
18 x 26	22 x 14	1098	488	439	399	366	338	314	293	275	258	244
*18 x 26	**30 x 18**	1165	518	466	424	388	358	333	311	291	**274**	259
18 x 26	30 x 14	1498	666	599	545	499	461	428	399	375	352	333
14 x 18	18 x 30	471	209	188	171	157	145	135	126	118	111	105
14 x 18	18 x 26	544	242	218	198	181	167	155	145	136	128	121
14 x 18	22 x 30	576	256	230	209	192	177	165	154	144	136	128
14 x 18	18 x 22	643	286	257	234	214	198	184	171	161	151	143
14 x 18	22 x 26	664	295	266	241	221	204	190	177	166	156	148
14 x 18	26 x 30	680	302	272	247	227	209	194	181	170	160	151
14 x 18	22 x 22	785	349	314	285	262	242	224	209	196	185	174
14 x 18	30 x 26	906	403	362	329	302	279	259	242	227	213	201
14 x 18	26 x 22	928	412	371	337	309	286	265	247	232	218	206
14 x 18	22 x 18	959	426	384	349	320	295	274	256	240	226	213
14 x 18	30 x 22	1071	476	428	389	357	330	306	286	268	252	238
14 x 18	26 x 18	1134	504	454	412	378	349	324	302	284	267	252
14 x 18	30 x 18	1309	582	524	476	436	403	374	349	327	308	291

NOTE *** To distribute approximately 270 kg of fertilizer per hectare using a spacing of 850 mm and considering the already established combination of 18 x 26 for the seeds (Scheme 1), use a combination of 30 x 18 for the fertilizer (Scheme 2).**

T²SI		Grams on 50 linear meters for each row unit	Granulated commercial fertilizer distribution table - T²SI									
Scheme 1	Scheme 2		Amount of kg/hectare for the different spacings between row units (mm).									
Seeds Drive/Driven	Fertilizer Drive/Driven		450	500	550	600	650	700	750	800	850	900
26 x 30	14 x 22	557	248	223	203	186	171	159	149	139	131	124
26 x 30	14 x 18	680	302	272	247	227	209	194	181	170	160	151
26 x 30	18 x 22	715	318	286	260	238	220	204	191	179	168	159
26 x 30	22 x 22	875	389	350	318	292	269	250	233	219	206	194
26 x 30	22 x 18	1069	475	428	389	356	329	305	285	267	252	238
26 x 30	18 x 14	1125	500	450	409	375	346	321	300	281	265	250
26 x 30	22 x 14	1375	611	550	500	458	423	393	367	344	324	306
22 x 22	14 x 30	471	209	188	171	157	145	135	126	118	111	105
22 x 22	14 x 26	544	242	218	198	181	167	155	145	136	128	121
22 x 22	18 x 30	606	269	242	220	202	186	173	162	152	143	135
22 x 22	14 x 22	643	286	257	234	214	198	184	171	161	151	143
22 x 22	18 x 26	700	311	280	255	233	215	200	187	175	165	156
22 x 22	22 x 30	741	329	296	269	247	228	212	198	185	174	165
22 x 22	14 x 18	785	349	314	285	262	242	224	209	196	185	174
22 x 22	18 x 22	826	367	330	300	275	254	236	220	207	194	184
22 x 22	22 x 26	854	380	342	311	285	263	244	228	214	201	190
22 x 22	26 x 30	875	389	350	318	292	269	250	233	219	206	194
22 x 22	30 x 26	1165	518	466	424	388	358	333	311	291	274	259
22 x 22	26 x 22	1193	530	477	434	398	367	341	318	298	281	265
22 x 22	22 x 18	1234	548	494	449	411	380	353	329	309	290	274
22 x 22	18 x 14	1298	577	519	472	433	399	371	346	325	305	288
*22 x 22	**30 x 22**	1377	612	551	501	459	424	393	367	344	324	**306**
22 x 22	26 x 18	1458	648	583	530	486	449	417	389	365	343	324
22 x 22	22 x 14	1587	705	635	577	529	488	453	423	397	373	353
22 x 22	30 x 18	1682	748	673	612	561	518	481	449	421	396	374
22 x 22	26 x 14	1876	834	750	682	625	577	536	500	469	441	417
22 x 22	30 x 14	2164	962	866	787	721	666	618	577	541	509	481

NOTE *** To distribute approximately 300 kg of fertilizer per hectare using a spacing of 900 mm and considering the already established combination of 22 x 22 for the seeds (Scheme 1), use a combination of 30 x 22 for the fertilizer (Scheme 2).**

T²SI		Grams on 50 linear meters for each row unit	Granulated commercial fertilizer distribution table - T²SI									
Scheme 1	Scheme 2		Amount of kg/hectare for the different spacings between row units (mm).									
Seeds Drive/Driven	Fertilizer Drive/Driven		450	500	550	600	650	700	750	800	850	900
26 x 22	14 x 30	557	248	223	203	186	171	159	149	139	131	124
26 x 22	18 x 30	716	318	286	260	239	220	205	191	179	168	159
26 x 22	14 x 22	760	338	304	276	253	234	217	203	190	179	169
26 x 22	22 x 30	875	389	350	318	292	269	250	233	219	206	194
26 x 22	14 x 18	927	412	371	337	309	285	265	247	232	218	206
26 x 22	18 x 22	976	434	390	355	325	300	279	260	244	230	217
26 x 22	22 x 22	1193	530	477	434	398	367	341	318	298	281	265
26 x 22	22 x 18	1458	648	583	530	486	449	417	389	365	343	324
26 x 22	18 x 14	1534	682	614	558	511	472	438	409	384	361	341
*26 x 22	**30 x 22**	1627	723	651	592	542	501	465	434	407	383	**362**
26 x 22	22 x 14	1876	834	750	682	625	577	536	500	469	441	417
26 x 22	30 x 18	1988	884	795	723	663	612	568	530	497	468	442
26 x 22	30 x 14	2556	1136	1022	929	852	786	730	682	639	601	568
22 x 18	14 x 30	576	256	230	209	192	177	165	154	144	136	128
22 x 18	14 x 26	664	295	266	241	221	204	190	177	166	156	148
22 x 18	18 x 30	741	329	296	269	247	228	212	198	185	174	165
22 x 18	14 x 22	785	349	314	285	262	242	224	209	196	185	174
22 x 18	18 x 26	854	380	342	311	285	263	244	228	214	201	190
22 x 18	22 x 30	904	402	362	329	301	278	258	241	226	213	201
22 x 18	14 x 18	959	426	384	349	320	295	274	256	240	226	213
22 x 18	18 x 22	1010	449	404	367	337	311	289	269	253	238	224
22 x 18	22 x 26	1044	464	418	380	348	321	298	278	261	246	232
22 x 18	26 x 30	1069	475	428	389	356	329	305	285	267	252	238
22 x 18	22 x 18	1234	548	494	449	411	380	353	329	309	290	274
22 x 18	30 x 26	1424	633	570	518	475	438	407	380	356	335	316
22 x 18	26 x 22	1458	648	583	530	486	449	417	389	365	343	324
22 x 18	22 x 18	1508	670	603	548	503	464	431	402	377	355	335
22 x 18	18 x 14	1587	705	635	577	529	488	453	423	397	373	353
22 x 18	30 x 22	1682	748	673	612	561	518	481	449	421	396	374
22 x 18	26 x 18	1782	792	713	648	594	548	509	475	446	419	396
22 x 18	22 x 14	1939	862	776	705	646	597	554	517	485	456	431
22 x 18	30 x 18	2056	914	822	748	685	633	587	548	514	484	457
22 x 18	26 x 14	2291	1018	916	833	764	705	655	611	573	539	509
22 X 18	30 x 14	2644	1175	1058	961	881	814	755	705	661	622	588

NOTE *** To distribute approximately 360 kg of fertilizer per hectare using a spacing of 900 mm and considering the already established combination of 26 x 22 for the seeds (Scheme 1), use a combination of 30 x 22 for the fertilizer (Scheme 2).**

T²SI		Grams on 50 linear meters for each row unit	Granulated commercial fertilizer distribution table - T²SI									
Scheme 1	Scheme 2		Amount of kg/hectare for the different spacings between row units (mm).									
Seeds Drive/Driven	Fertilizer Drive/Driven		450	500	550	600	650	700	750	800	850	900
18 x 14	18 x 30	778	346	311	283	259	239	222	207	195	183	173
18 x 14	18 x 26	898	399	359	327	299	276	257	239	225	211	200
18 x 14	22 x 30	952	423	381	346	317	293	272	254	238	224	212
18 x 14	18 x 22	1062	472	425	386	354	327	303	283	266	250	236
18 x 14	22 x 26	1098	488	439	399	366	338	314	293	275	258	244
18 x 14	26 x 30	1125	500	450	409	375	346	321	300	281	265	250
*18 x 14	**22 x 22**	1298	577	**519**	472	433	399	371	346	325	305	288
18 x 14	30 x 26	1498	666	599	545	499	461	428	399	375	352	333
18 x 14	26 x 22	1534	682	614	558	511	472	438	409	384	361	341
18 x 14	22 x 18	1587	705	635	577	529	488	453	423	397	373	353
18 x 14	30 x 22	1770	787	708	644	590	545	506	472	443	416	393
18 x 14	26 x 18	1875	833	750	682	625	577	536	500	469	441	417
18 x 14	30 x 18	2163	961	865	787	721	666	618	577	541	509	481
30 x 22	14 x 26	742	330	297	270	247	228	212	198	186	175	165
30 x 22	14 x 22	876	389	350	319	292	270	250	234	219	206	195
30 x 22	18 x 26	953	424	381	347	318	293	272	254	238	224	212
30 x 22	14 x 18	1071	476	428	389	357	330	306	286	268	252	238
30 x 22	18 x 22	1129	502	452	411	376	347	323	301	282	266	251
30 x 22	22 x 26	1165	518	466	424	388	358	333	311	291	274	259
30 x 22	22 x 22	1377	612	551	501	459	424	393	367	344	324	306
30 x 22	26 x 22	1627	723	651	592	542	501	465	434	407	383	362
30 x 22	22 x 18	1683	748	673	612	561	518	481	449	421	396	374
30 x 22	18 x 14	1770	787	708	644	590	545	506	472	443	416	393
30 x 22	26 x 18	1989	884	796	723	663	612	568	530	497	468	442
30 x 22	22 x 14	2164	962	866	787	721	666	618	577	541	509	481
30 x 22	26 x 14	2557	1136	1023	930	852	787	731	682	639	602	568

NOTE *** To distribute approximately 520 kg of fertilizer per hectare using a spacing of 500 mm and considering the already established combination of 18 x 14 for the seeds (Scheme 1), use a combination of 22 x 22 for the fertilizer (Scheme 2).**

T²SI		Grams on 50 linear meters for each row unit	Granulated commercial fertilizer distribution table - T²SI									
Scheme 1	Scheme 2		Amount of kg/hectare for the different spacings between row units (mm).									
Seeds Drive/Driven	Fertilizer Drive/Driven		450	500	550	600	650	700	750	800	850	900
26 x 18	14 x 30	680	302	272	247	227	209	194	181	170	160	151
26 x 18	18 x 30	875	389	350	318	292	269	250	233	219	206	194
26 x 18	14 x 22	928	412	371	337	309	286	265	247	232	218	206
*26 x 18	**22 x 30**	1069	475	428	389	356	329	305	285	267	**252**	238
26 x 18	14 x 18	1134	504	454	412	378	349	324	302	284	267	252
26 x 18	18 x 22	1192	530	477	433	397	367	341	318	298	280	265
26 x 18	22 x 22	1458	648	583	530	486	449	417	389	365	343	324
26 x 18	22 x 18	1782	792	713	648	594	548	509	475	446	419	396
26 x 18	18 x 14	1875	833	750	682	625	577	536	500	469	441	417
26 x 18	30 x 22	1988	884	795	723	663	612	568	530	497	468	442
26 x 18	22 x 14	2291	1018	916	833	764	705	655	611	573	539	509
26 x 18	30 x 18	2430	1080	972	884	810	748	694	648	608	572	540
26 x 18	30 x 14	3124	1388	1250	1136	1041	961	893	833	781	735	694
30 x 18	14 x 26	906	403	362	329	302	279	259	242	227	213	201
30 x 18	14 x 22	1071	476	428	389	357	330	306	286	268	252	238
30 x 18	18 x 26	1165	518	466	424	388	358	333	311	291	274	259
30 x 18	14 x 18	1309	582	524	476	436	403	374	349	327	308	291
30 x 18	18 x 22	1377	612	551	501	459	424	393	367	344	324	306
30 x 18	22 x 26	1424	633	570	518	475	438	407	380	356	335	316
30 x 18	22 x 22	1683	748	673	612	561	518	481	449	421	396	374
30 x 18	26 x 22	1989	884	796	723	663	612	568	530	497	468	442
30 x 18	22 x 18	2056	914	822	748	685	633	587	548	514	484	457
30 x 18	18 x 14	2164	962	866	787	721	666	618	577	541	509	481
30 x 18	26 x 18	2431	1080	972	884	810	748	695	648	608	572	540
30 x 18	22 x 14	2664	1184	1066	969	888	820	761	710	666	627	592
30 x 18	26 x 14	3126	1389	1250	1137	1042	962	893	834	782	736	695

NOTE *** To distribute approximately 250 kg of fertilizer per hectare using a spacing of 850 mm and considering the already established combination of 26 x 18 for the seeds (Scheme 1), use a combination of 30 x 22 for the fertilizer (Scheme 2).**

Important

The data on the previous tables (seed and fertilizer) can vary due to several factors. Therefore, carefully observe the following procedures.

Practical test of seed and fertilizer distribution

The most indicated way to assess the amount of seed and fertilizer rate is performing the test on the same field the plantation will take place, following these steps:

• Whenever possible, use the same tractor and operator to perform the plantation.

• Mark the distance for the test. Fertilizer table example: 50 linear meters.

• Adjust the pressure of the row units over the soil, according to the instructions on page 35.

• Fill up the planter hoppers at least to the half and then drive some meters to completely fill the meterings before entering in the delimited area.

• Place the collection bags in the fertilizer dispensers (preferably use plastic bags). In the seed dispensers, use cotton waste to hinder the exits.

• Drive the tractor in the delimited space, using the same speed that will be used in the whole plantation.

Recommended speeds:

5 to 6 km/h for corn and sunflower plantation.

6 km/h for bean/sorghum/acid delinted cotton plantation.

7 km/h for soybean plantation.

• Weigh the fertilizer contained in the bags and compare it to the tables on the previous pages. **(Grams in 50 meters on each row unit).**

• Remove the cotton waste of the seed dispensers, picking up the seeds for counting. By doing so, it is also possible to check if there is any damage on them.

• If necessary, redo the tests changing the adjustments.

• After getting the desired amount and still in the field, move the tractor in the same speed, leaving the fertilizer and seed to reach the soil for better verifying the distribution uniformity. Check the depth adjustment on pages 36 and 37.

ATTENTION

- **The working speed affects the uniform seed distribution.**
- **When there is a change in the batch of seeds as well as in the fertilizer manufacturer, everything must be assessed again.**
- **It is important to assess all adjustments again after the first day of work.**

Auxiliary calculation for fertilizer distribution

To distribute other amounts of fertilizer in different spacings and areas from those presented in the tables we suggest a quick calculation, where all used data can be changed to ones of your own interest. Use the formula below, which contains the following elements:

A = Area to be fertilized (m²).

B = Spacing between rows of the crop (m).

C = Amount of fertilizer to be distributed in the area (kg).

D = Distance to travel for the distribution test (m).

X = How many grams should be dropped in "D"?

Formula:

$$X = \frac{B \times C}{A} \times D$$

Example:

A = 10,000 m²

B = 0.90 m

C = 250 kg

D = 50 m

X = ?

$$X = \frac{0.90 \times 250}{10{,}000} = 0.0225 \times 50$$

X = 1.125 kg or

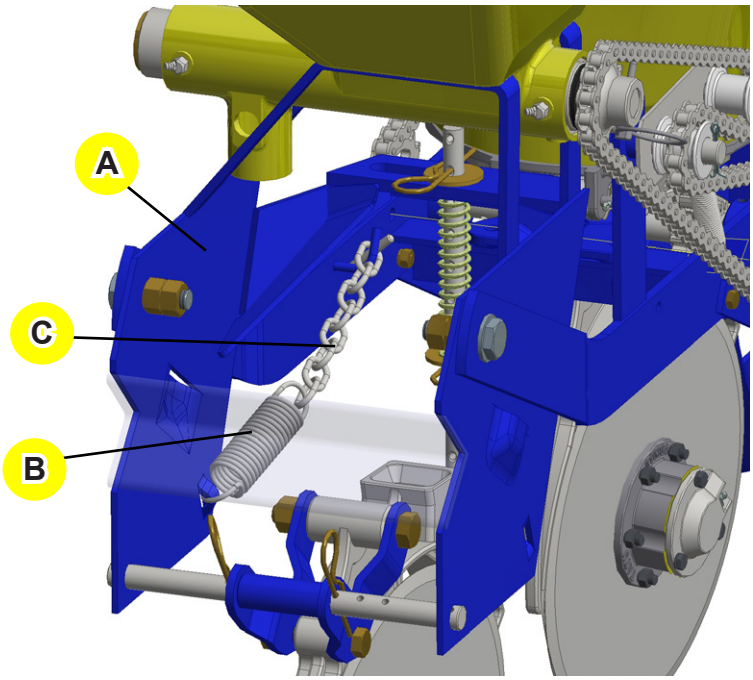
X = 1,125 grams on 50 meters for each row unit.

Adjust the equipment to distribute the found amount or the best approximation in the delimited space for the test.

The amount of "grams on 50 meters for each row unit" appears on the column of several tables of this manual.

Pressure adjustment of the row units over the soil

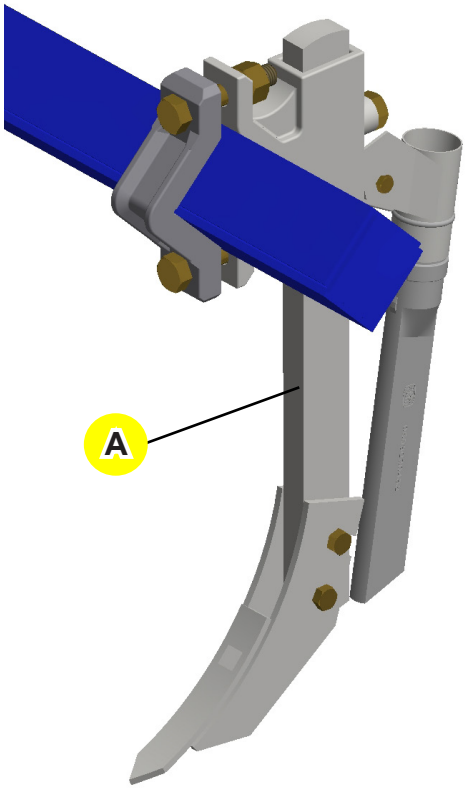
For a better oscillation of the row units during the plantation and to reduce the slippage index of the compaction wheels, use the adjustment found on the row unit (A) laterals of the frame. To do so, compress the springs (B) through the chains (C).

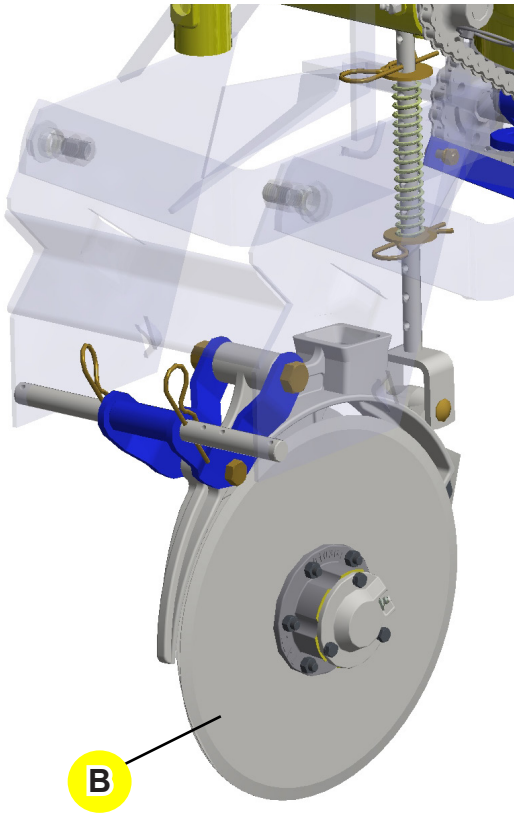


NOTE **As a starting point, we suggest using the fifth link of the chain counting from the spring and to adjust according to the local conditions.**

Fertilizer distribution over the soil

The fertilizer distribution over the soil can be done through the furrower rods (A) or double discs (B).



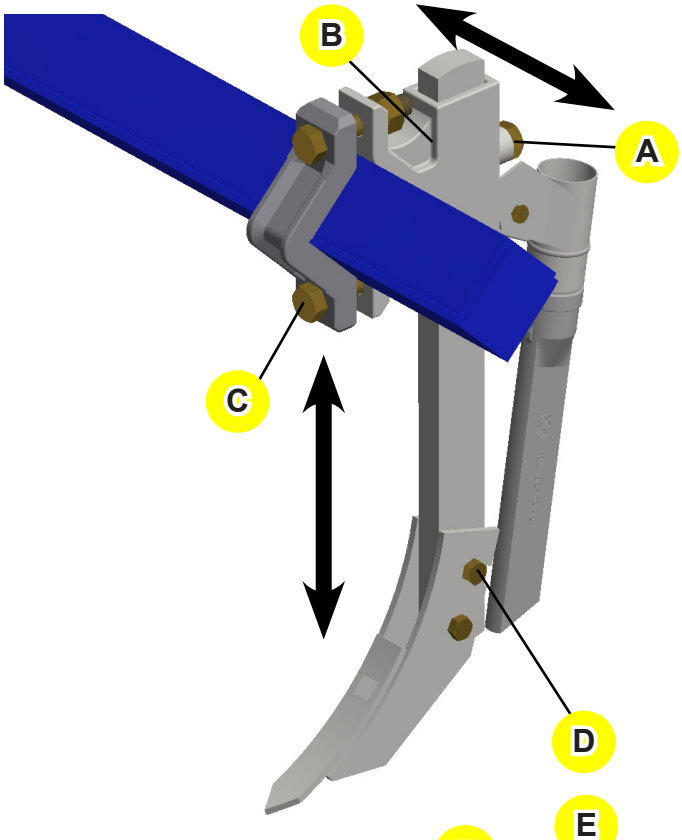


Depth and position of the fertilizer

• With furrower rod

When the planter is equipped with a furrower rod, the fertilizer depth is adjusted through the bolt (A). The position related to the seed must be adjusted by loosening the bolts (C) of the fixation support (B) on the row unit of the frame.

The shank has a retrieving device through the bolt (D) so it is easier to pass obstacles such as stones, roots and others.

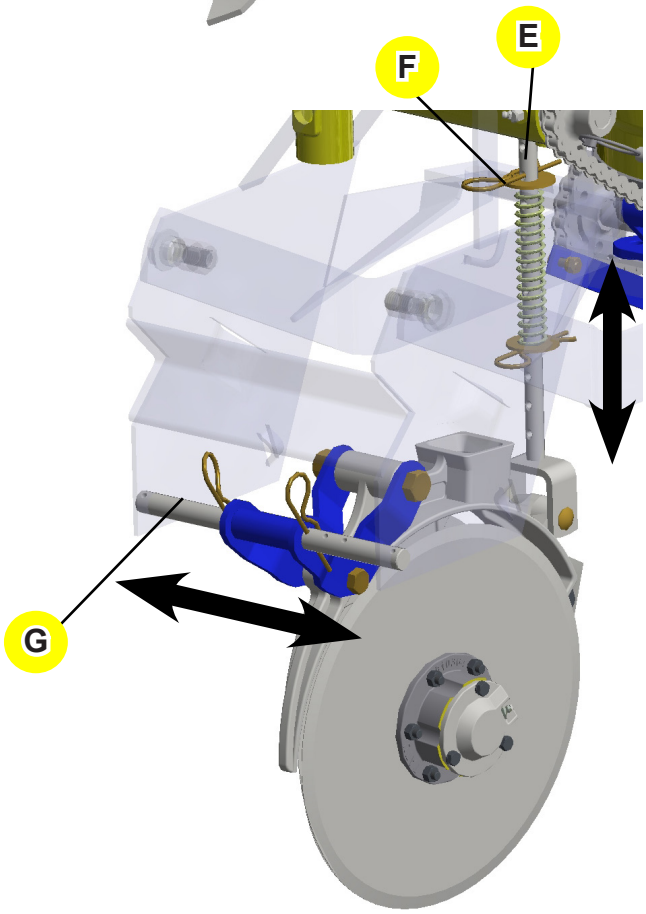


NOTE **Place the shank back on its original position manually.**

• With double disc

In this case, the fertilizer depth is adjusted by the slotted rod (E) and it is possible to give a greater pressure on the springs when proportionally changing the cotter pins (F).

The fertilizer position related to the seed must be adjusted by the fixation rod (G), displacing the double disc to the desired position.



NOTE

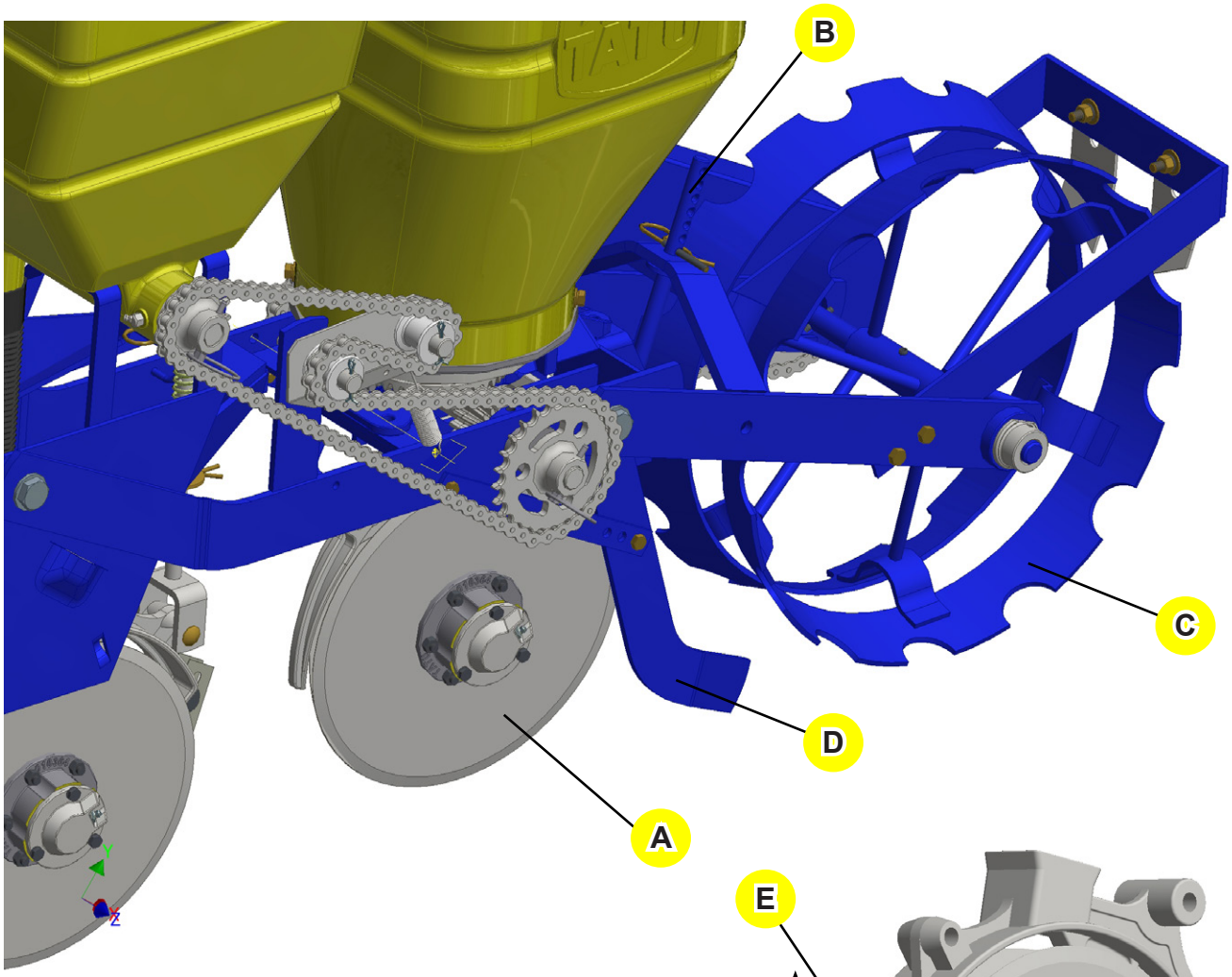
- **On both cases, the fertilizer can be positioned on the same row unit and below/on the lateral and below the seeds.**
- **The fertilizer position related to the seed must be well observed in order to not compromise the plantation.**

Seeds placement, depth and coverage

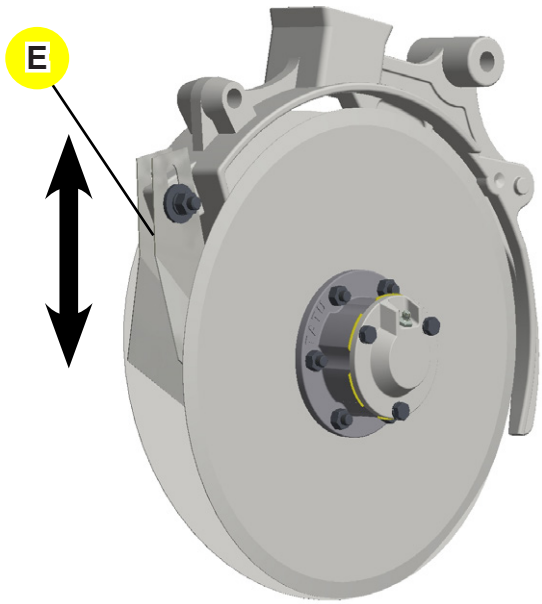
The seeds are deposited on the soil through the double discs (A).

The depth is adjusted through slotted rods (B) and the coverage is done through the compaction wheels (C).

NOTE **The fixed coverers (D) are adjustable and helps on the seed covering process.**



These double discs (seed and fertilizer) have flexible and adjustable scrapers (E) to remove the earth that got stuck on the inner part of the discs.



Row markers

The row marker utilization is very important to achieve an uniform spacing in the plantation, thus facilitating the cultivation and harvest.

To adjust the marker discs it is just necessary to loosen up the bolts and displace the marker (A) to the desired position. This distance can be obtained as follows:

NOTE **For this practical adjustment it is necessary to keep the front and rear gauges with the same measure, being the central measure of the front tires equal to the rear ones.**

• Drive some meters on a prepared soil, being the planter hitched.

• Measure the distance (D) between the center of the tractor trace and the center of the first seed row (row in the planter extremity).

• Sum up the found measure with the spacing between rows (E) measure, considering the spacing that is being used in the equipment.

• The result is the distance (F) that should exist between the row marker disc and the center of the first seed row (row in the planter extremity).

Example:

D - Tractor trace center to the center of the first seed row = 600 mm.

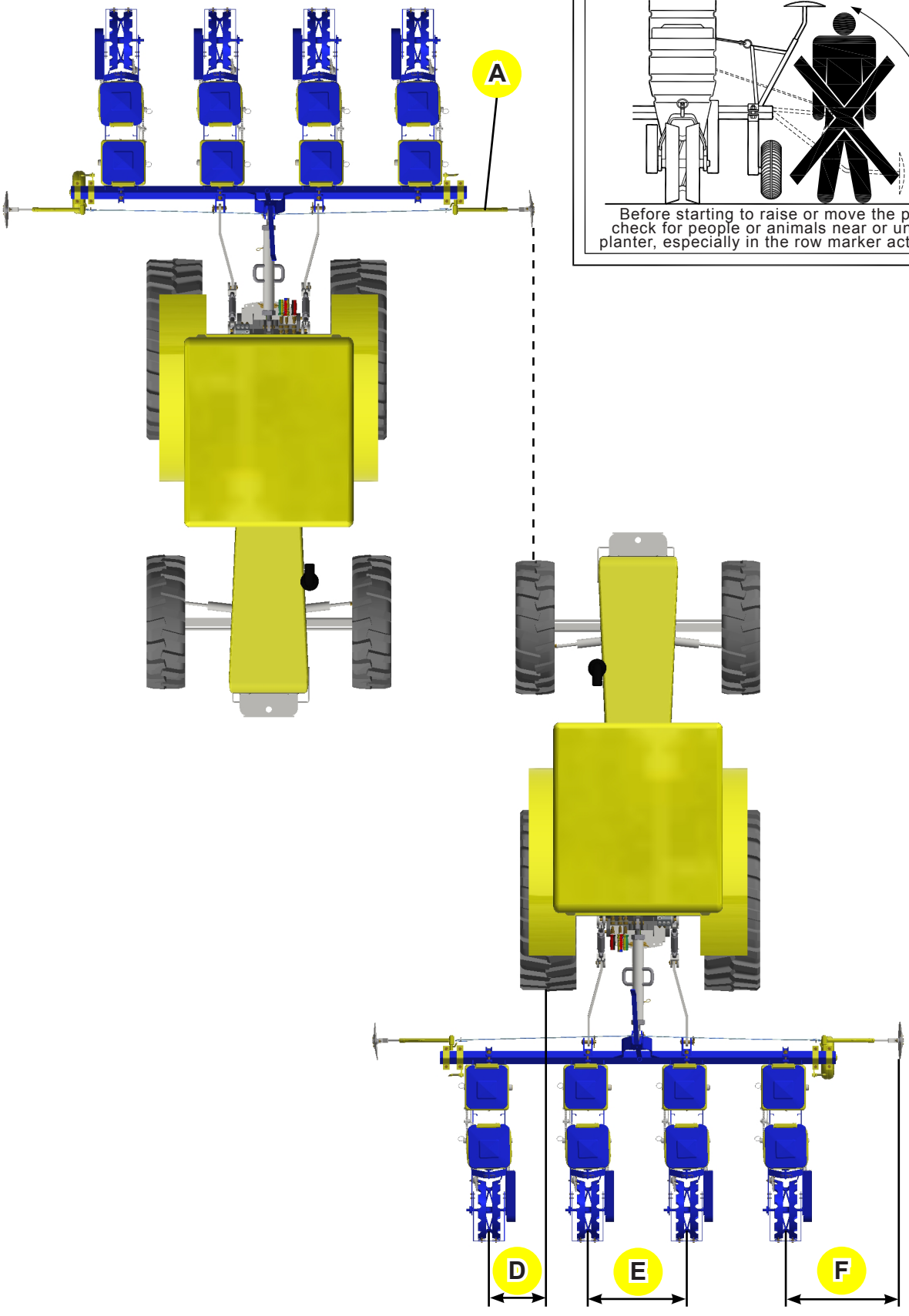
E - Spacing between row crops = 900 mm.

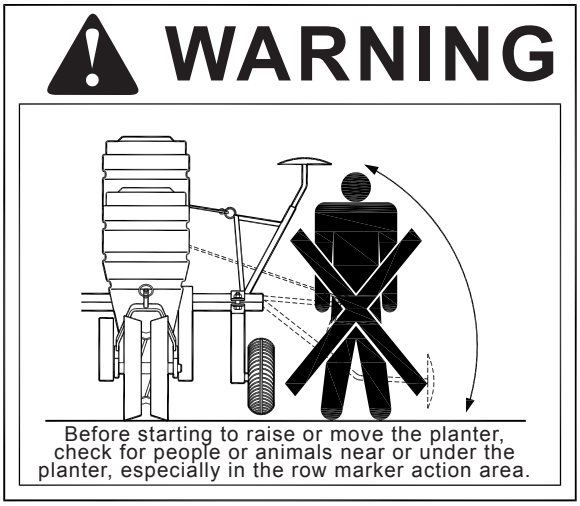
F - Distance to be found (?).

So:	**D**	**+**	**E**	**=**	**F**
	600	**+**	**900**	**=**	**1,500 mm.**

F = 1,500 mm

This is the distance between the center of the first seed row and the marker disc lowered to the soil.


A
D
E
F


WARNING
Before starting to raise or move the planter, check for people or animals near or under the planter, especially in the row marker action area.

Operations - Important points

Retighten nuts and bolts after the first day of planting. Check the conditions of all pins and cotter pins. Then, retighten every 24 working hours.

- Carefully observe the lubrication intervals.
- Keep the lower arms of the tractor hydraulic lift adjusted.
- When filling up the planter, observe its proper hitching to the tractor. Verify if there is any object inside the hoppers that may cause damage to the metering devices.
- Always use seeds and fertilizer free from impurities.
- Clean the seed hoppers twice a day and check the proper functioning of the fertilizer metering system.
- Keep the equipment leveled.
- Periodically check the established adjustments in the beginning of the plantation.
- Always remember to adjust the seeds first and then the fertilizer.
- Give special attention to the fertilizer position related to the seed.
- Carefully check the seed depth and the compaction pressure.
- It is important to maintain a constant speed in the whole plantation.
- Use the row markers correctly to avoid future wastes.
- Never make maneuvers or use reverse gear when the rows are touching the soil.
- To make any verification in the equipment, it is necessary to lower it to the ground and shut down the tractor engine.
- During working or transportation, the presence of passengers on the tractor or equipment is not allowed.
- As previously mentioned, the planter features several adjustments. However, only the local conditions can determine the best adjustment thereof.

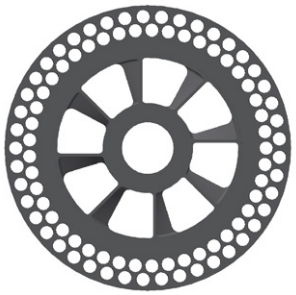
Optional

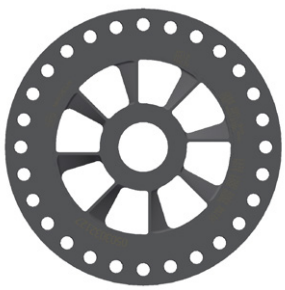
Seed plates

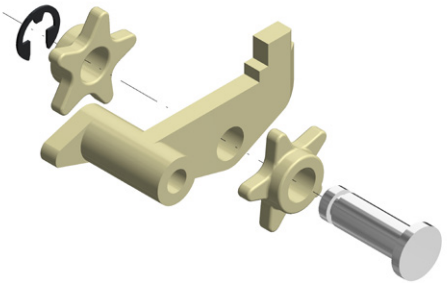
Optionally, MARCHESAN supplies slotted, perforated or blind seed plates for several crops, according to the list below:

Seed plates	Amount of holes/slots	Hole/slot dimension	Thickness	Serial number
Corn	24 holes	Ø 11 mm	4.5 mm	05.02.02.0351
Corn	24 holes	Ø 9.5 mm	4.5 mm	05.02.02.0366
Soybean	40 slots	9 x 14 mm	8.5 mm	05.02.02.0329
Soybean	94 holes	Ø 8 mm	5.5 mm	05.03.03.1933
Soybean	34 slots	10 x 16 mm	8.5 mm	05.02.02.0328
Bean	34 slots	10 x 16.5 mm	5.5 mm	05.02.02.0333
Bean	38 slots	9 x 19.5 mm	5.5 mm	05.02.02.0408
Bean/Delinted cotton	40 slots	7 x 12 mm	4.5 mm	05.02.02.0419
Bean/Delinted cotton	64 slots	7 x 12 mm	4.5 mm	05.02.02.0585
Sorghum	40 holes	Ø 6 mm	5.5 mm	05.03.03.2007
Rice	40 slots	7 x 17 mm	5.5 mm	05.02.02.0346
Sunflower	28 slots	4.5 x 12 mm	3.0 mm	05.03.03.2008
Sunflower	28 slots	6 x 13 mm	4.5 mm	05.02.02.0554
* Soybean	100 holes	Ø 7 mm	5.5 mm	05.02.02.0564
* Soybean	90 holes	Ø 9 mm	5.5 mm	05.02.02.0565
* Blind	Ø 190 mm	—	4.5 mm	05.03.03.1677
* Blind	Ø 190 mm	—	5.5 mm	05.03.03.1678
* Blind	Ø 190 mm	—	8.5 mm	05.02.02.0340

NOTE *** These seed plates have two rows of holes and need a complete double rocker arm.**







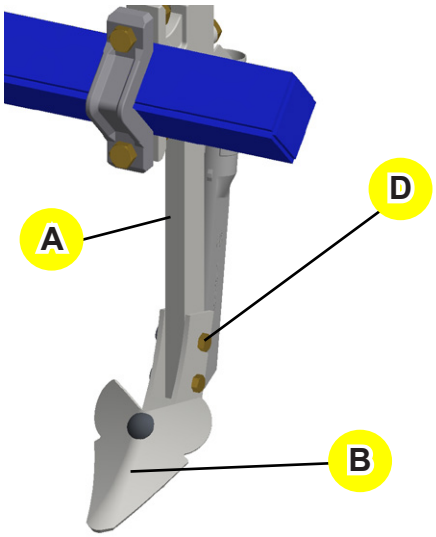
Optional

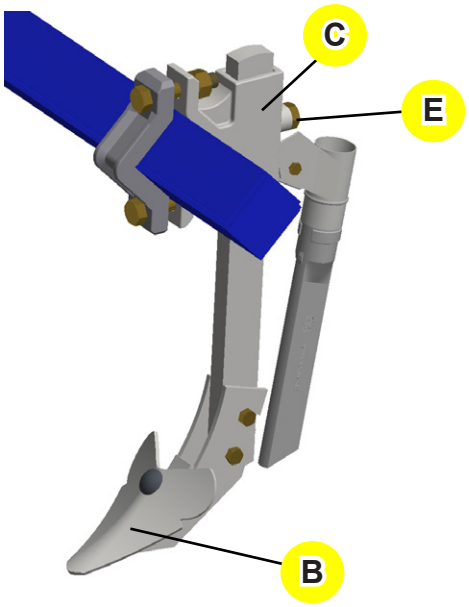
Furrower for corn

- When the planter is equipped with a furrower rod for the fertilizer, acquire a shank of 8" (B) and fasten it to the rod (A).
- When the planter is assembled with a double disc for the fertilizer, acquire the complete furrower rod with a shank of 8" (C), which is coupled to the frame.
- The furrower has a device to retrieve the shank through the bolt (D) so it is easier to pass over obstacles such as stones, roots and others.

NOTE **Place the shank back on its original position manually.**

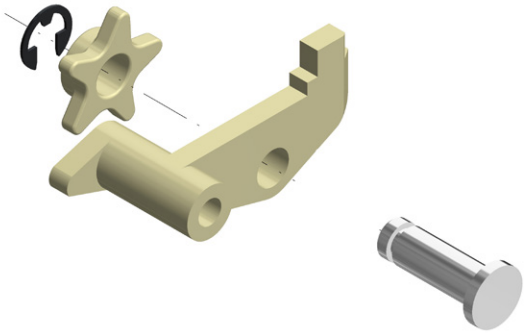
- The depth adjustment of the furrower is done through the bolt (E), which allows the set to go up or down.





Special pulley for sorghum

For planting sorghum, where the holes on the seed plates vary from 4 to 6 mm, it is necessary to taper the pulley so that they enter on the pulley and execute its function properly.



16-teeth sprocket for seeds

To taper even more the adjustment of seeds per linear meter, Marchesan optionally supplies the sprocket with 16 teeth.

Row markers with lever

Optionally, the planter can be supplied with a lever for the row markers so it is easier to handle them.

Couple the lever (A) to the frame using a bolt (B), spring guides (C), spring (D) and nuts.

To fasten the support arms of the row markers, follow the instructions on page 15.

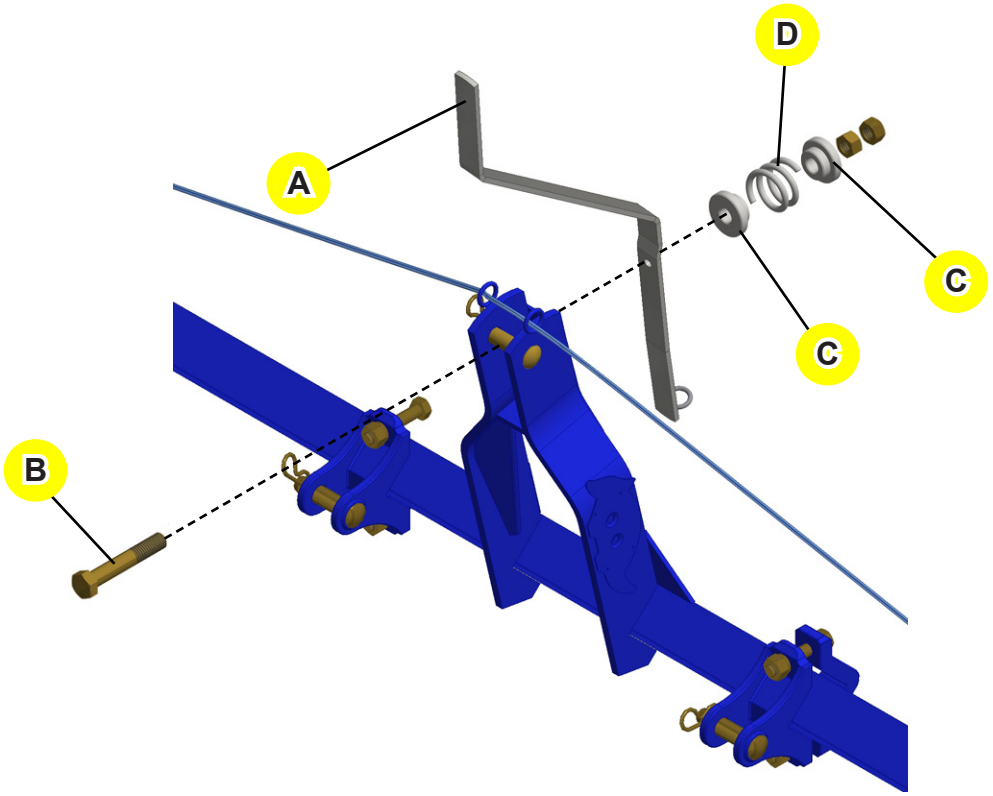
The nylon ropes are assembled through the clamps and have the following dimensions:

Ø 3/8" x 1,000 mm for a frame of 1,800 mm (two);

Ø 3/8" x 1,500 mm for a frame of 2,800 mm (two);

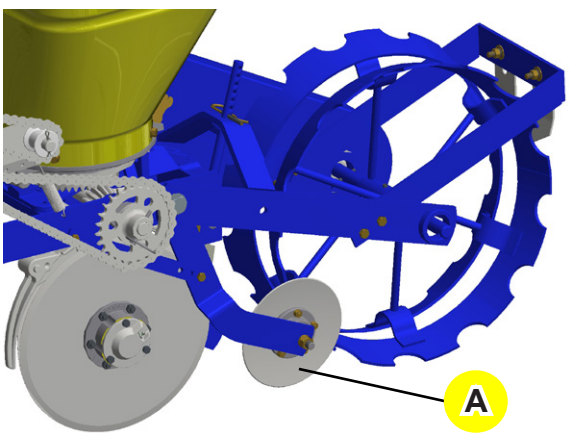
Ø 3/8" x 1,700 mm for a frame of 3,200 mm (two);

Ø 3/8" x 1,900 mm for a frame of 3,600 mm (two).



Covering discs

The covering discs (A) are otionally supplied to cover the seeds, which are fastened to the frame of the row units using bolts, spring washers and nuts.



Set for planting peanut

Versatile and with adjustments that allows the plantation of several sizes of grains. On this system, the seed falls by gravity.

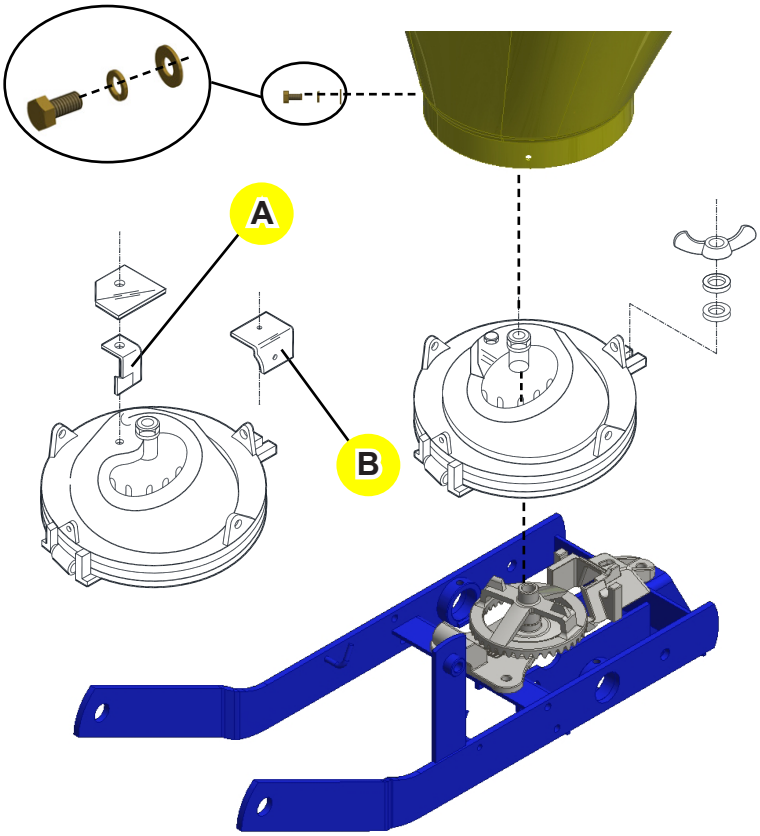
The dosing plates (A and B) also goes with the set to allow a distribution of a greater or smaller amount of seeds.

Dosing plate (A):

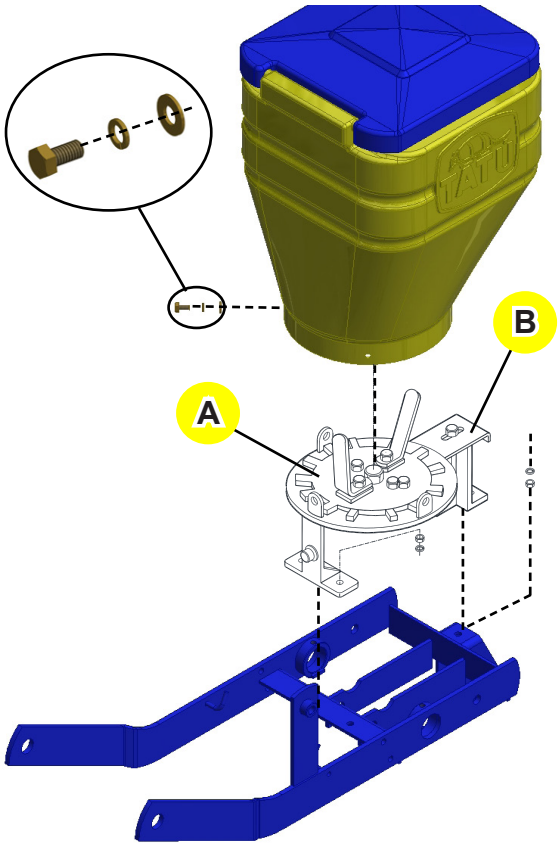
Greater amount.

Dosing plate (B):

Smaller amount.



Metering set for cotton linter



Efficient metering system moved by sprockets that turns the teethed disc in order to distribute the seeds.

Fasten this set (A) by replacing the normal metering and also the seed tube, as shown in the illustration.

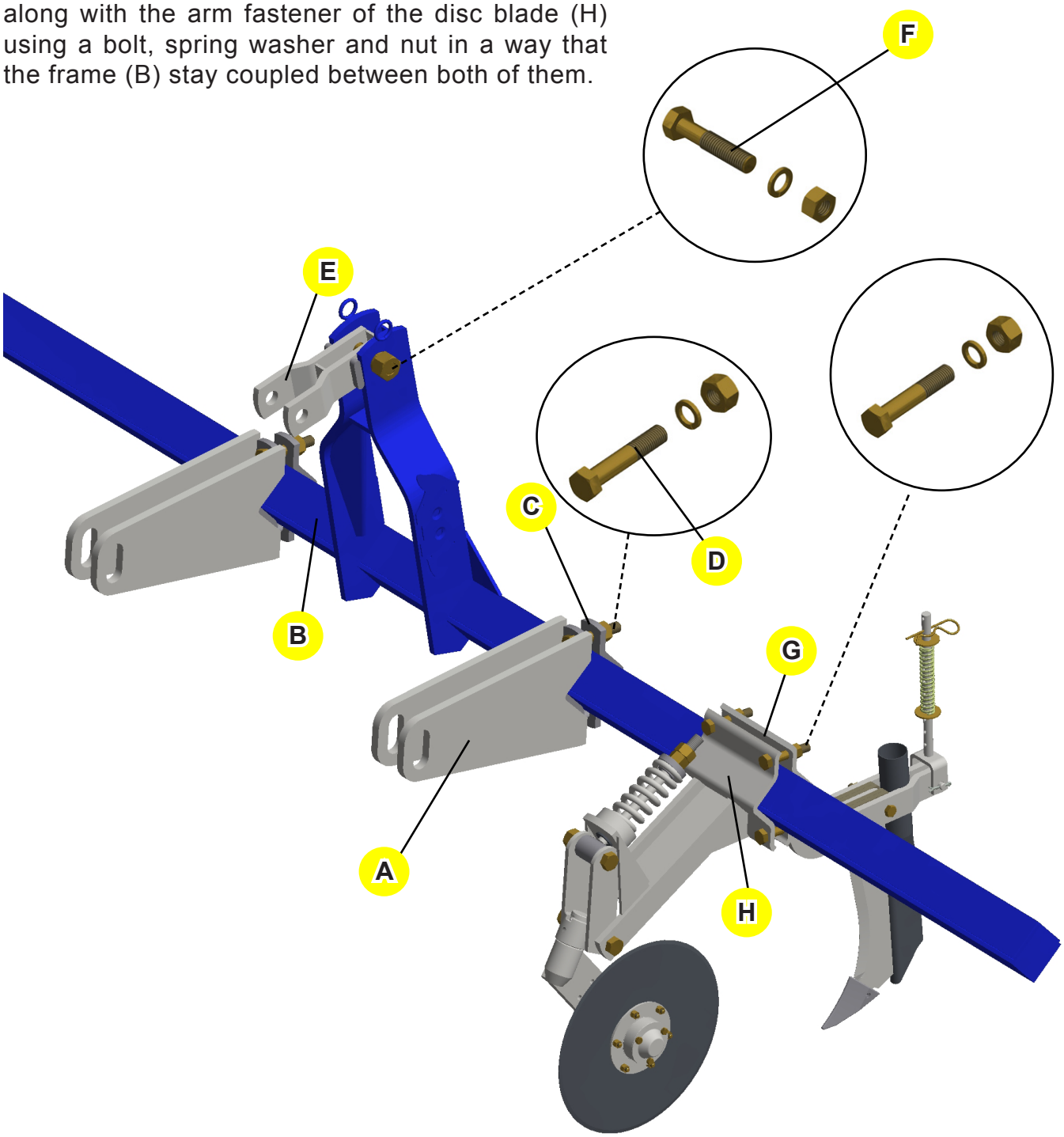
The seed dosing is obtained through the dosing plate (B).

Set for semi-tillage plantation

The kit for a semi-tillage plantation is optionally supplied. Assemble it as follows:

• Couple the hitch (A) to the frame (B) using the fixation elements: hitch guide fastener (C), bolt (D), spring washers and nuts that can be found on the frame structure. Fasten the drawbar supplement (E) using the fixation elements: bolt (F), spring washer and nut.

• Assemble the fastener support of the rod (G) along with the arm fastener of the disc blade (H) using a bolt, spring washer and nut in a way that the frame (B) stay coupled between both of them.



NOTE **The fixation elements, hitch guide fastener (C), bolt (D), spring washer and nut are the same ones that were removed from the tractor hitch.**

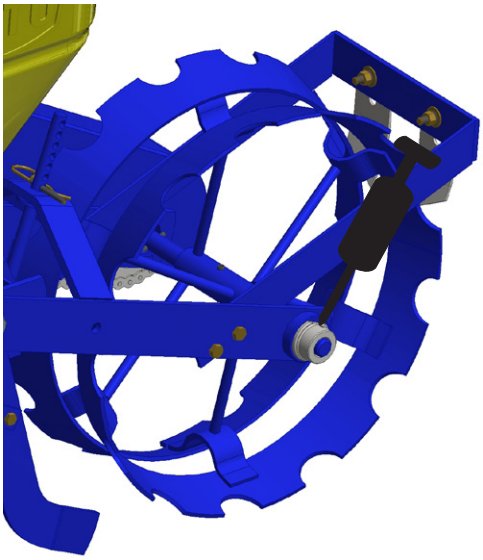
Lubrication

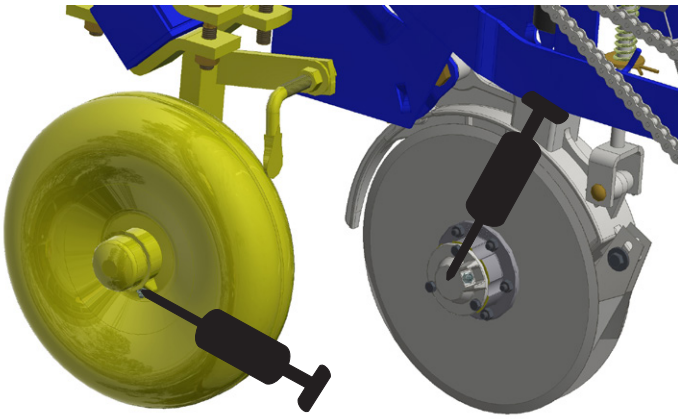
In order to reduce the wearing caused by the friction in the moving parts of the equipment, it is necessary to make a correct lubrication, as indicated below:

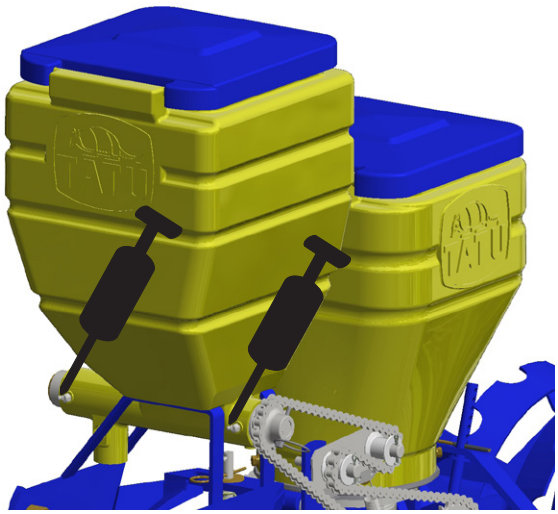
- Be certified about the lubricant quality, with relation to its efficiency and purity, avoiding the use of products contaminated by water, earth and others.
- Use medium consistency grease.
- Remove the remainder old grease around the articulations.
- Clean up all the grease fittings with a cloth before introducing the lubricant and replace the defective ones.
- Introduce an enough amount of new grease.

NOTE **Special attention should be given to the lubricant intervals on the different points of the planter.**

Lubricate every 10 working hours







NOTE **Lubricate the points shown above and all grease fittings as well.**

Fertilizer metering system maintenance

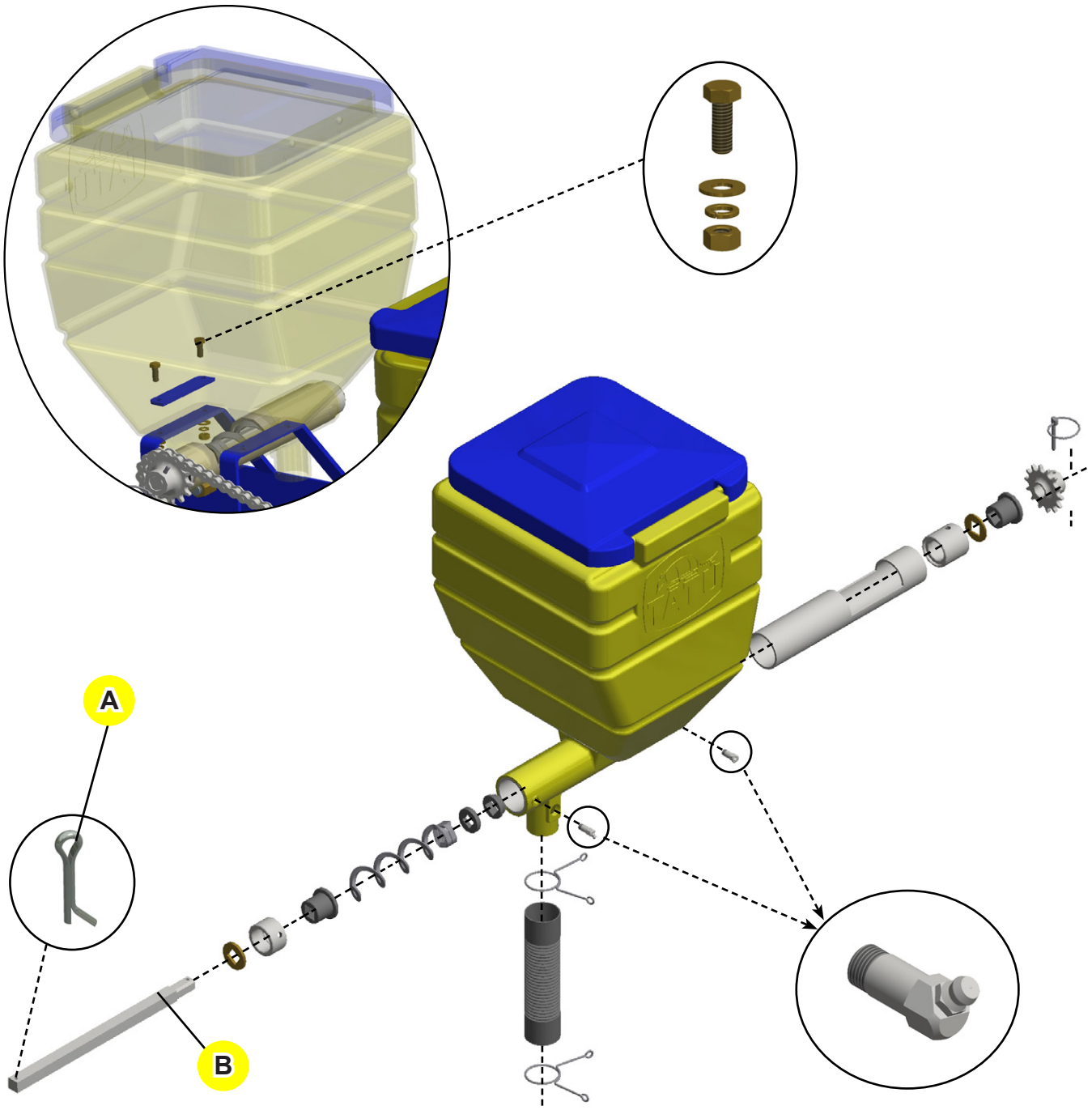
For the correct maintenance of the fertilizer metering system or to make any type of repair on its inner part, proceed as follows:

• Loosen up the bolts that fasten the polyethylene hoppers and remove them.

• Remove the cotter pin (A) leaving the squared shaft (B) totally free; disassemble it completely and replace any part, if necessary.

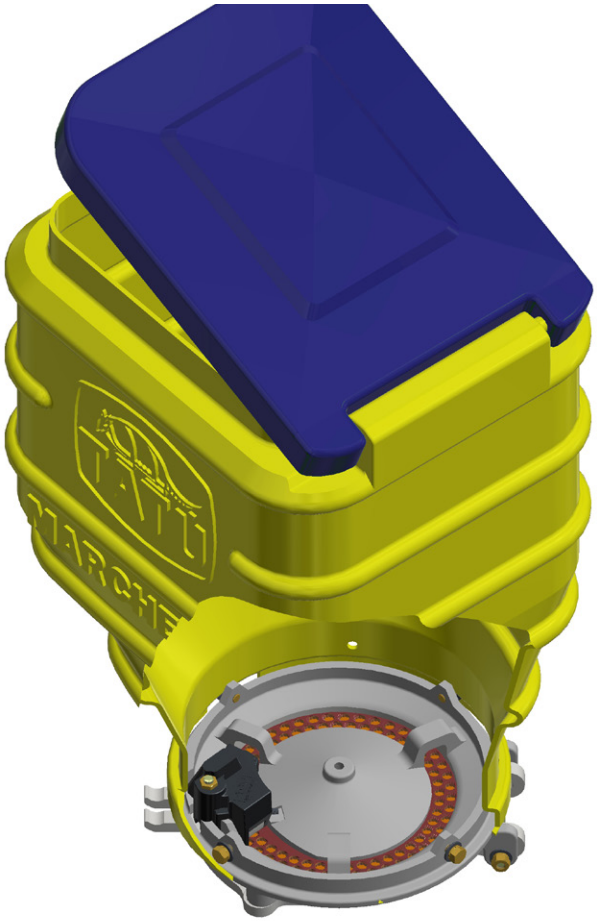
NOTE

- **Do not forget to lubricate the meterings daily, as previously mentioned on the 'lubrication' item, ths avoiding future problems.**
- **Use TATU original parts only.**



Cleaning the seed metering

It is necessary to make a general cleaning in each seed metering daily. To do this, remove the seed plate and observe the metering mechanism operation. By doing so, the best planting will be assured.



NOTE **When using graphite powder with treated/inoculated seeds, it is necessary to clean the system twice a day.**

Planter storage

- The driving mechanism chains should be removed at the end of the planting season, cleaned and stored in a recipient with oil until the next planting season.
- Remove the fertilizer hoses and wash them immediately just with water and neutral soap.
- Wash the whole equipment, especially the fertilizer hoppers, using only water.
- Verify all the moving parts of the planter for wearing occurence. If necessary, replace some parts and leave the planter ready for the next planting season.
- Repair the damaged paintwork.
- Spray the metallic parts with protective oil. Never spray used engine lubricant oil.
- After making all repairs and maintenance cares, store the planter in a covered and dry place.
- Keep the planter properly supported and avoid the direct contact of the discs and tires with the soil.

NOTE **• Use TATU original parts only.**

Important

ATTENTION

MARCHESAN S/A reserves the right at any time to make improvements in the design, material or specifications of machinery, equipment or parts without thereby becoming liable to make similar changes in machinery, equipment or parts previously sold.

Images are for illustration purposes only.

Some illustrations in this manual appear without the safety devices, removed to allow a better view and detailed instructions. Never operate the equipment without these safety devices.

TECHNICAL PUBLICATION DIVISION

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Notes