



# Operating Manual

## Side Knife

### John Deere 600

Version A

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## Masthead

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Manufacturer: Zürn Harvester GmbH & Co. KG  
Schöntal

Applicable to: John Deere 600

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We reserve the right to make technical amendments

Printed on paper made from chlorine-free and acid-free bleached pulp

## Foreword

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This side knife is designed only for the usual application in agricultural work or similar activities. Any other use beyond this is deemed improper use of the machine. The manufacturer accepts no liability whatsoever for damage resulting from improper use; the risk will be borne solely by the user. Proper use also includes complying with the operation, maintenance and service conditions specified by the manufacturer.

Read this operating manual thoroughly to familiarize yourself with the correct operation and maintenance of the machine and to prevent injuries or damage to the machine. Not doing so can result in injuries or machine damage. This operating manual and the safety labels on the machine may also be available in other languages: please enquire at your dealership.

This operating manual is part of the machine and should be handed over to the purchaser if the machine is re-sold.

Dimensions specified in this operating manual are metric. Use only appropriate parts and bolts. Different spanners are required for metric bolts and bolts with imperial (inch) dimensions.

The designations "left" and "right" are with reference to the forward direction of the machine.

Enter the serial number in the first section of the operating manual. Please record all numbers accurately. In case of theft, these numbers can be important for tracing the machine. Your dealer also needs these numbers when you order spare parts. It is a good idea to keep a second record of these numbers in another location.

Your dealer has carried out an inspection of the machine prior to delivery. A further inspection should be carried out by your dealer after the first 20 to 50 hours of operation in order to ensure the best possible performance for the machine.

This side knife must only be used, serviced and repaired by persons who are familiar with it and who have been briefed about its hazards. The relevant accident prevention regulations and other generally recognized rules and laws for safety, occupational health and road traffic must also be observed. Unauthorized changes to this trailer release the manufacturer from liability for any resulting damage.

## Rating Plate

Please make a note of the type designation and serial number of your machine here. This information must be given to the authorized dealer when ordering spare parts or making guarantee enquiries.

Type: \_\_\_\_\_

Serial number: \_\_\_\_\_

Typ	_____	  <small>Zürn Harvesting GmbH &amp; Co. KG Kapellenstr. 1 · D-74214 Schöntal Tel. +49 7943/9105-0 Made in Germany · www.zuern.de</small>
Modell	_____	
Bezeichnung	_____	
Serien-Nr.	_____	
Baujahr	_____	
Leergewicht	_____	

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## Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



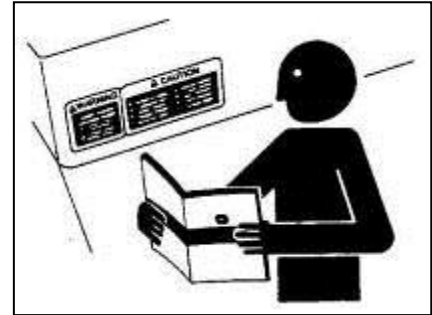
## Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

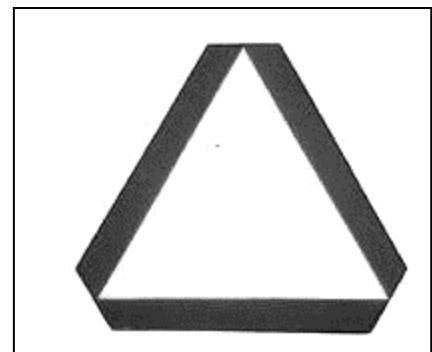
Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.



## Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.



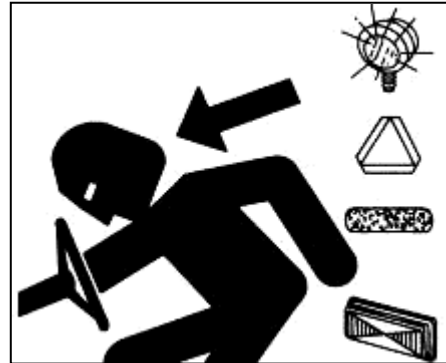
## Safety

### Use Safety Lights and Devices

Slow moving tractors, self-propelled equipment and towed implements or attachments can create a hazard when driving on public roads. They are difficult to see, especially at night. Avoid personal injury or death resulting from collision with a vehicle.

If legally permitted, use flashing warning lights or rotary beacons whenever driving on public roads. To increase visibility, use the lights and devices provided with your machine. For some equipment, install additional flashing warning lights.

Keep safety items in good condition. Replace missing or damaged items. An implement safety lighting kit is available from your John Deere dealer.

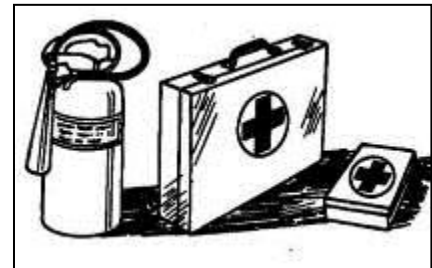


### Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



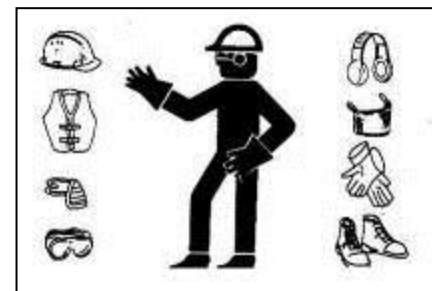
### Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



## Safety

### Store Attachments Safely

Stored attachments such as dual wheels, cage wheels, and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.

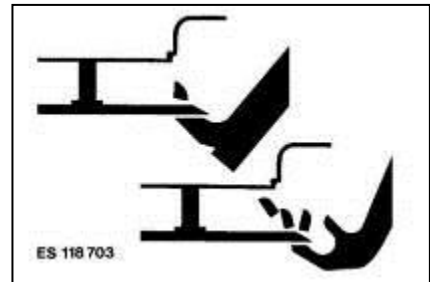


### Guards and Shields

Keep guards and shields in place at all times. Ensure that they are serviceable and installed correctly.

Always disengage main clutch, shut off engine and remove key before removing any guards or shields.

Keep hands, feet and clothing away from moving parts.



### Stay Clear of Harvesting Units

Cutterbar, auger, reel and feed rolls cannot be completely shielded due to their function. Stay clear of these moving elements during operation. Always disengage main clutch, shut off engine and remove key before servicing or unclogging machine.



### Keep Hands Away From Knives

Never attempt to clear obstructions in front of or on harvesting unit unless main clutch is disengaged, engine shut off and key removed.

Everyone must be clear of the machine before starting the engine.



## Safety

### Stay Clear of Rotating Drivelines

Entanglement in backshaft rotating driveline can cause serious injury or death.

Keep driveline shields in place at all times.

Wear close-fitting clothing. Stop the combine engine and be sure driveline is stopped before making adjustments, connections, or cleaning out header or its drive components.



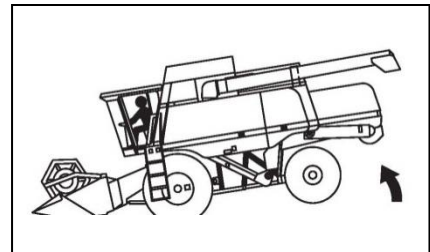
### Stay Clear of Cutterbar When Rotating Auger

The Cutterbar knife and cross auger use a common belt drive. Whenever the auger is rotated by hand the Cutterbar will move. Use extreme caution to keep hands, feet and clothing clear of the Cutterbar and its knives when attempting to rotate cross auger for service, adjustment, inspection or unplugging.



### Ballasting for Safe Ground Contact

Operating, steering and braking performance of combine can be considerably affected by heavy front end attachments which alter the center of gravity of the combine. To maintain the necessary ground contact, ballast the combine at the rear end as necessary. Observe the maximum permissible axle loads and total weights.



**Practice Safe Maintenance**

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any build-up of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

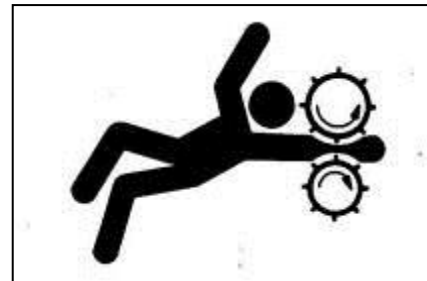
On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



**Service Machines Safely**

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewellery to prevent electrical shorts and entanglement in moving parts.



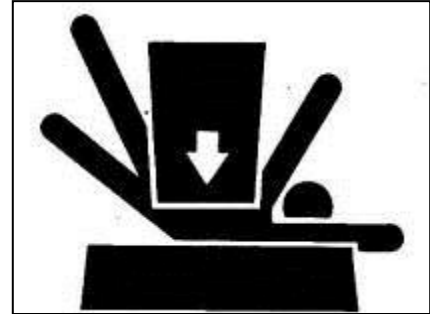
## Safety

### Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

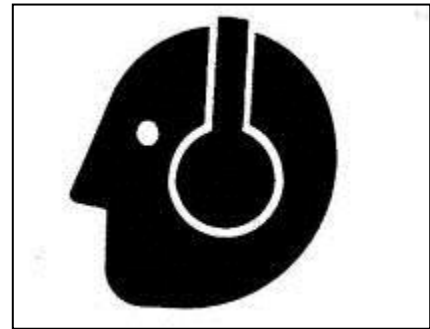
When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.



### Protect Against Noise

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



### Avoid Heating near Pressurized Fluid Lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.



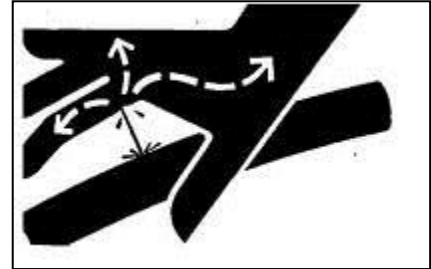
**Avoid High-Pressure Fluids**

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



**Dispose of Waste Properly**

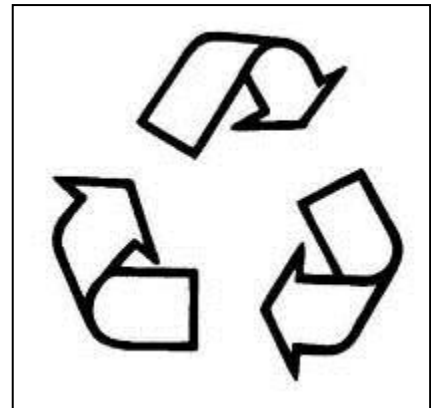
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment includes such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



## Safety Decals

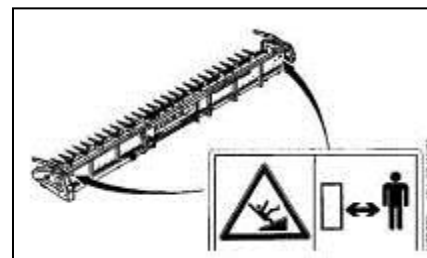
### Pictorial Safety Signs

At several important places of this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown below



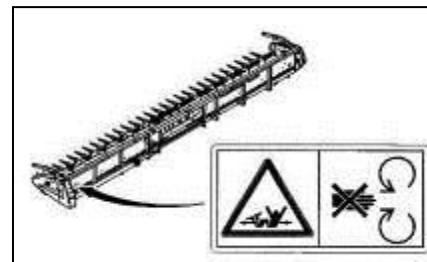
### Cutting Platform

DANGER- Stay clear of header. Disengage header drive, shut off engine and remove key before servicing or unclogging header.



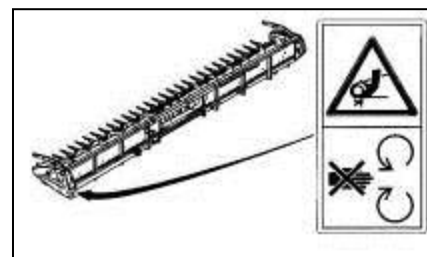
### Cutting Platform Drive Shaft

Stay clear of rotating drive shaft to avoid personal injury!



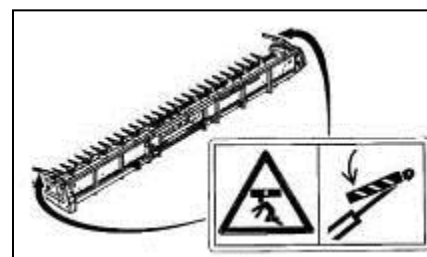
### Shields on Cutting Platform Drives

Do not open or remove safety shields while the engine is running.



### Reel Lifting Cylinder

Secure lifting cylinder with locking device before entering hazardous area.



## Fitting Instructions Side Cutter JD 600 right, mechanical

Fit the header to the combine harvester and set its inclination as specified in the JD operating manual.

On the right side of the header, remove the knife cover plate and break out the perforated cutout in the metal side wall.

Cutout for angle drive

Knife cover plate



Remove the first two finger units on the right side, one triple finger, one double finger and the last two blades of the mower knife. Fit the triple finger in place of the removed double finger, and the supplied open double finger together with the pressure plates.

Fit the knife follower with four bolts M6x20 to the mower knife together with the blades.

Open double finger

New position, triple finger  
Swap with double finger

Angle drive

Pressure plate



Fit the clamp hook holder.

Holes for clamp hook holder.



Clamp hook holder.



Slide the side cutter onto the header tip and secure with the two quick-release clamps.

Fit the adjusting screw to the header tip.

Lower quick-release clamp

Adjusting screw

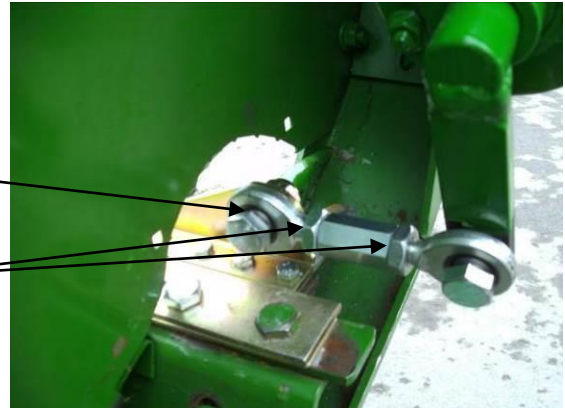
Quick-release clamp, top



Connect the knife follower with the side cutter and place a spacer each either side of the clevis mounts.

Bolt for disassembly

Knife stroke adjusting screw



Turn the knife by hand and set to mid-stroke.

Check knife stroke at the side cutter and, if necessary, correct by adjusting the clevis mounts.

Spacers

To uninstall the side cutter, release the screw connecting knife follower and clevis mount.



A uniform overlap of the side cutter must be ensured in the middle position.

If the overlap is incorrect, the length of the ball joint link bearing must be changed. To do this, loosen the lock nut and take out one of the retaining bolts. Set the new length, re-insert the retaining bolt and tighten the lock nut again.



If necessary, the cutout in the side wall can be closed with a cover plate.

Cover plate



Changes as of construction year 2010

Compensate  
5 mm gap with  
washers

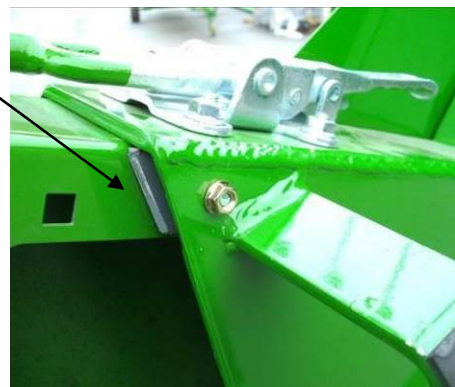
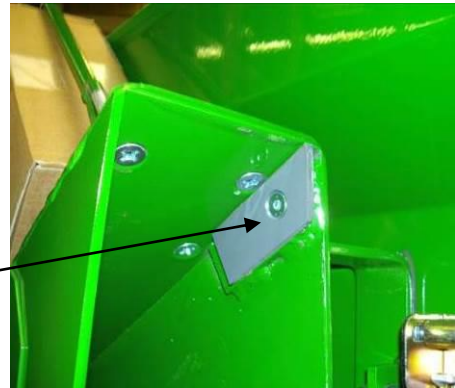
Drill  $\varnothing$  9 mm  
holes



Place four spacers



Fit plastic plates for side  
stop



## Transport mount on header trailer JD 600 Compact

Fit the transport mount to the header trailer.

The position is determined by trailer and header model.



Release the holder, pull out and turn to mounting position.



Clamp adjusting screw



Upper quick-release clamp

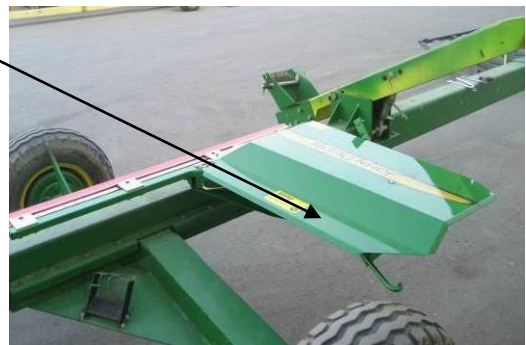


Quick-release clamp locked



Slide the side cutter onto the holder and secure with the upper quick-release clamp.

Side cutter turned into transport position.



Slide in holder and secure  
with quick-release clamp



Also secure side cutter with lower  
clamp hook and mounting bolt



Check the position of the side cutter relative to the central tube and, if necessary, set horizontal on the holder with three mounting bolts.

Mounting bolts



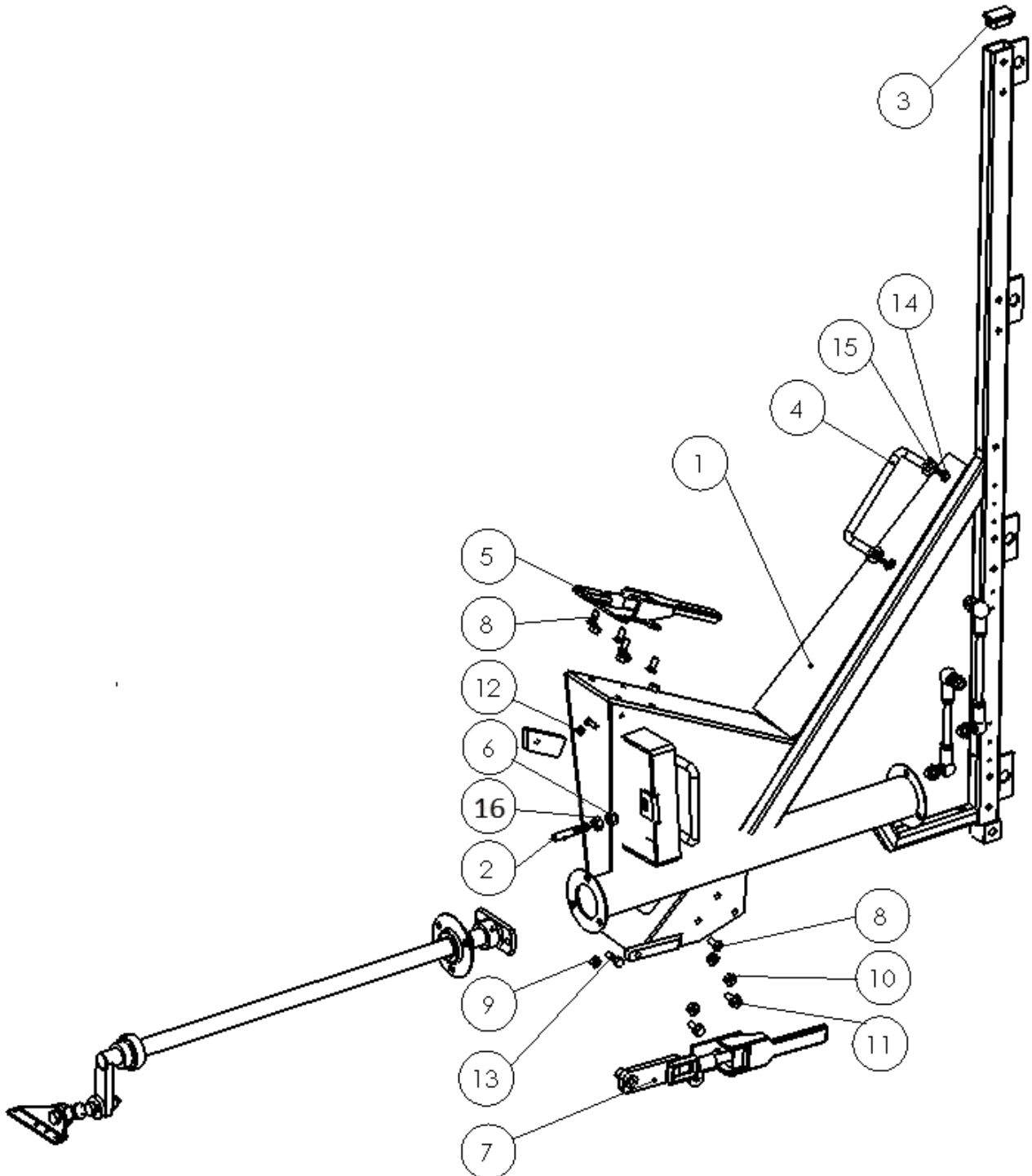
Before placing the header onto the trailer, check the distance between side cutter and trailer rests to prevent a collision with the side cutter.

Set down the header.



# Spare parts list

## Frame

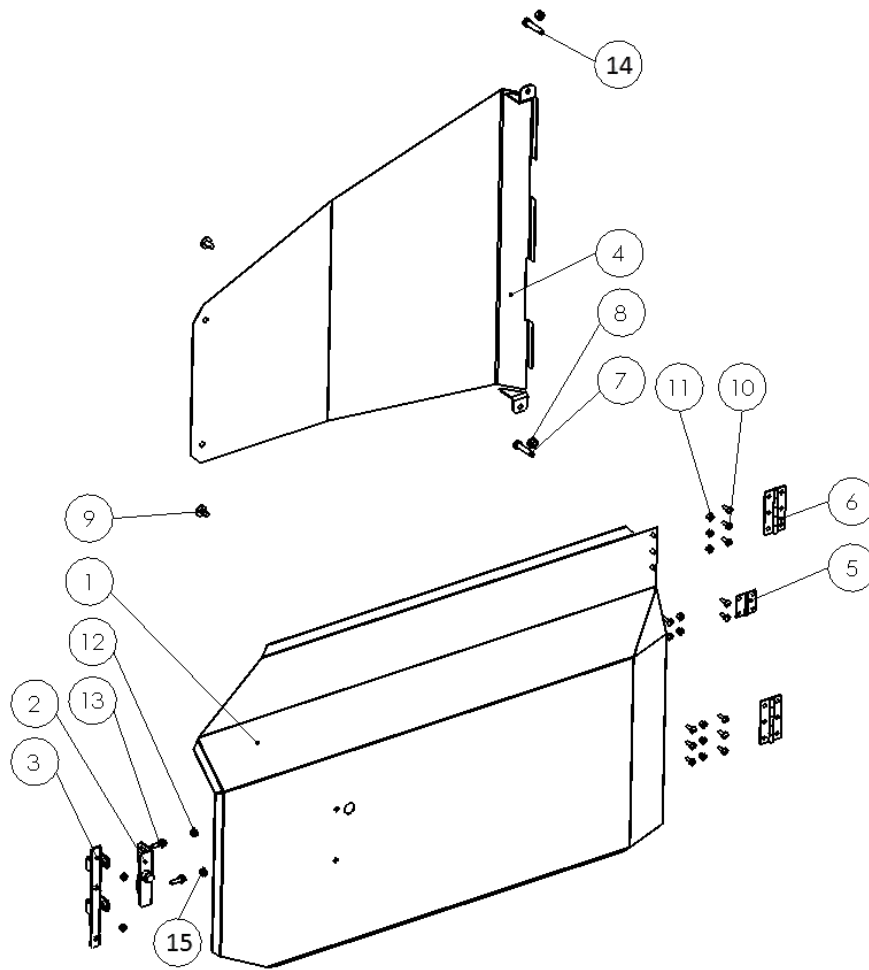


## Frame

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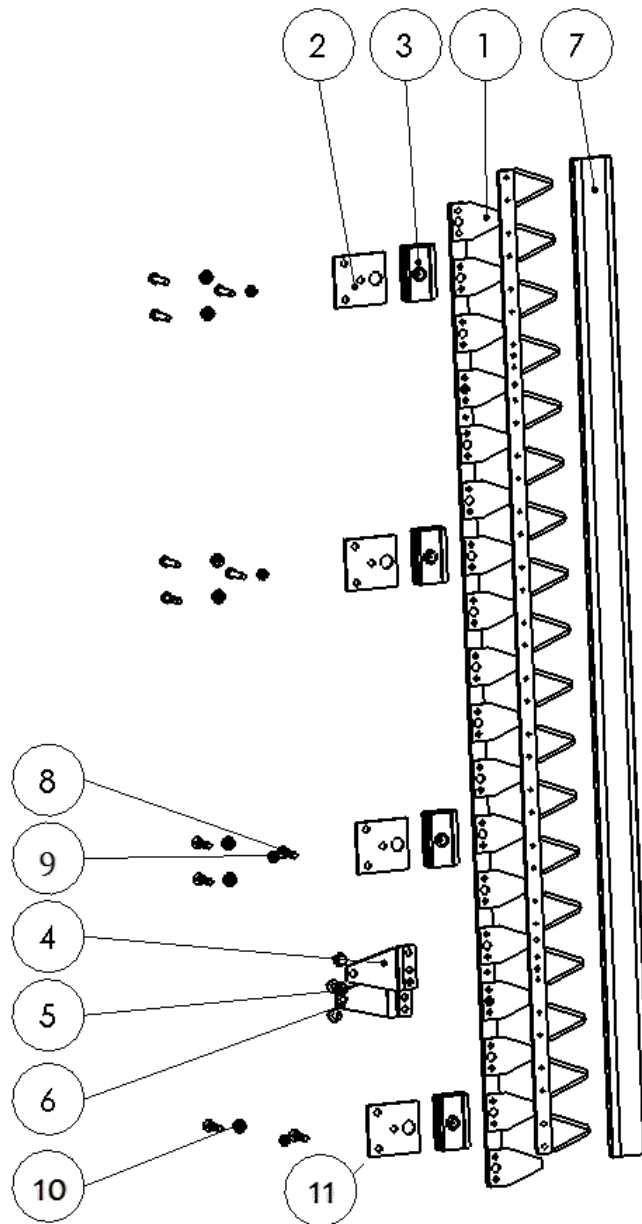
Pos.	Number	Description	Technical details	Qty.
1	16025	Frame Compact 600, welded part		1
2	16125	Stud screw	M10x60	1
3	18359	Beam end cap		1
4	50296	Handle, side cutter		1
5	16129	Eccentric tensioner, top		1
6	70015	Hexagon Nut	DIN934 M10	1
7	16130	Quick-release plate		1
8	70098	Hexagon-head bolt	DIN965 M8x20	5
9	70008	Hexagon nut, low profile	DIN439 M12	1
10	70005	Self-locking Nut	DIN6923 M8	8
11	70044	Hexagon-head bolt	DIN6921 M8x20	2
12	70004	Flanged Nut	DIN6923 M6	1
13	70366	Hexagon nut	DIN933 M12x30	1
14	16164	Safety split pin		2
15	70076	Washer	DIN125 A13	2
16	70007	Nut, low profile	DIN936 M10	1

## Side components



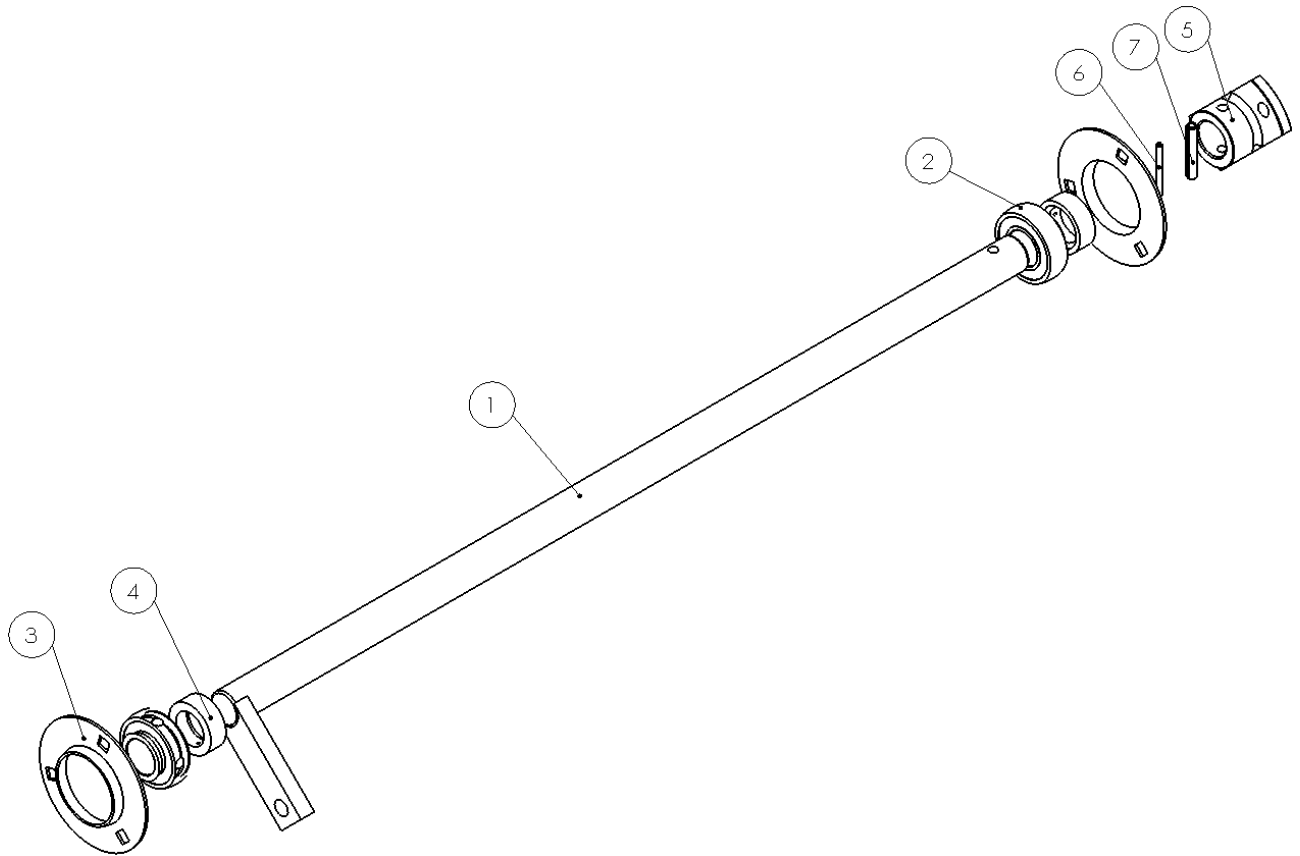
Pos.	Number	Description	Technical details	Qty.
1	16128	Compact guard		1
2	18240	Lock S-fasteners		1
3	16135	Lock bracket, 2 holes, complete		1
4	16200	Side guard inner		1
5	18252	Hinge narrow		1
6	18233	Hinge wide		2
7	70814	Bolt, countersunk allen head	DIN965 M8x45	2
8	70005	Hexagon flanged nut	DIN6923 M8	2
9	70101	Fillister-head bolt	ISO7380 M6x6	2
10	70028	Fillister-head bolt	ISO7380 M6x10	3
11	70020	Self-locking nut	DIN985 M6	8
12	70020	Self-locking nut	DIN 985 M6	2
13	70060	Hexagon-head bolt	DIN933 M8x20	2
14	70102	Fillister-head allen bolt	ISO7380 M8x40	1
15	70854	Washer form	DIN125 A6	2
16	70688	Fillister-head bolt	ISO7380 M6x8	2

## Blades



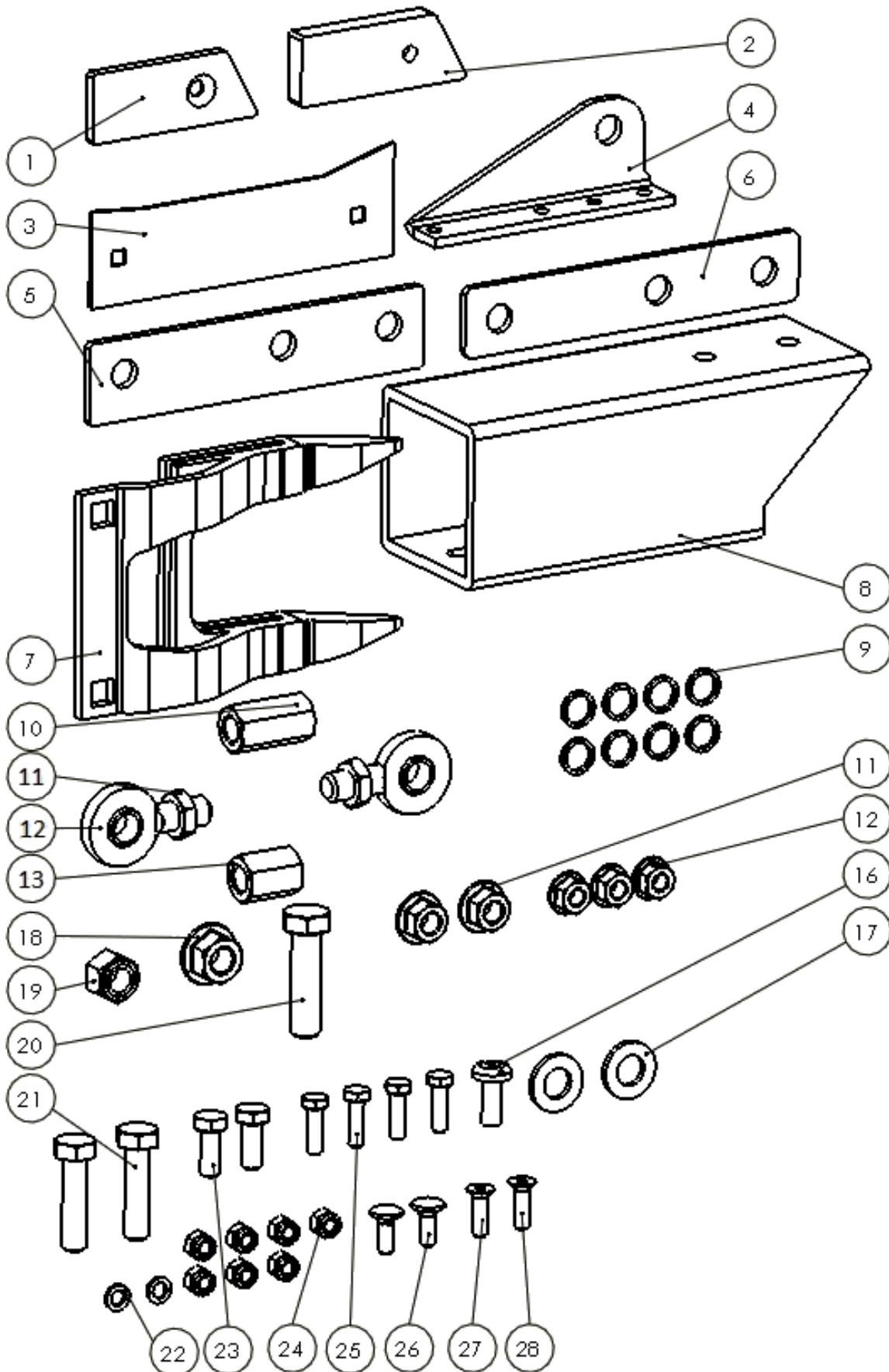
Pos.	Number	Description	Technical details	Qty.
1	18307	Rapeseed knife, 18-blade complete		2
2	19100	Plate 75.5x70.5 with 3 countersinks		2
3	18343	Knife guide		8
4	18803	Lever 110 mm right		1
5	70042	Self-locking bolt	DIN6921 M8x12	4
6	18804	Lever 110 mm left		1
7	18350	Knife guard		1
8	70813	Countersunk Torx bolt 40	M8x42,5	11
9	70103	Hexagon self-locking nut, low	DIN985 M8	4
10	70005	Hexagon flanged nut	DIN 6923 M8	8
11	19047	Plate 75.5 x70.5, 2 countersinks		2

## Shaft



Pos.	Number	Description	Technical details	Qty.
1	16132	Drive shaft Compact, welded part, 710 mm		1
2	18373	Ball bearing		2
3	18372	Bearing shell		2
4	18371	Setting collar		2
5	18381	Swivelling lever		1
6	70094	Locating pin	ISO8752 4x40	1
7	70171	Locating pin	ISO8752 7x40	1
1-7	16206	Shaft assembly		1

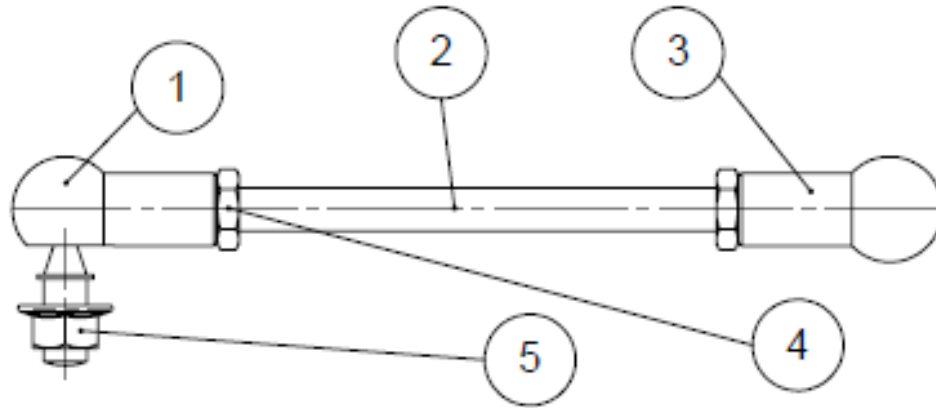
Accessories



## Accessories

Pos.	Number	Description	Technical details	Qty.
1	16003	POM shim	bis MY2010	1
2	16010	POM shim, housing	ab MY2010	1
3	16133	Cover plate header right		1
4	16147	Drive plate		1
5	16906	Pressure plate, top, 4 mm		1
6	16907	Pressure plate, bottom, 3.5 mm		1
7	18225	Double finger Special		1
8	16144	Bracket mounting		1
9	18388	Spacer		8
10	70710	Union nut across flats	M12x35	1
11	70008	Hexagon nut, low profile	DIN439 M12	2
12	16178	GAR 12 DO shortened		2
13	70709	Union nut across flats	M12x25	1
14	70006	Self-locking nut	DIN6923 M10	2
15	70005	Self-locking nut	DIN6923 M8	3
16	70108	Flat round-head bolt, slotted	M8x20	1
17	70076	Washer form	DIN125 A13	2
18	70012	Self-locking nut	DIN6923 M12	1
19	70022	Self-locking nut	DIN985 M12	1
20	70139	Hexagon bolt with shank	DIN931 M12x45	1
21	70062	Hexagon nut	DIN931 M10x40	2
22	70177	Washer, mudguard	DIN 522 6,4x20x1,25	1
23	70060	Hexagon-head bolt	DIN933 M8x20	2
24	70020	Self-locking nut	DIN985 M6	7
25	70149	Hexagon-head bolt	DIN933 M6x20	4
26	70107	Mushroom-head square neck bolt and nut	DIN603 M6x16	2
27	70973	Countersunk allen head bolt	DIN7991 M6x20	1
28	70974	Countersunk allen head bolt	DIN7991 M6x25	1
1-28	18993	Attachment parts Compact 600 JD		1

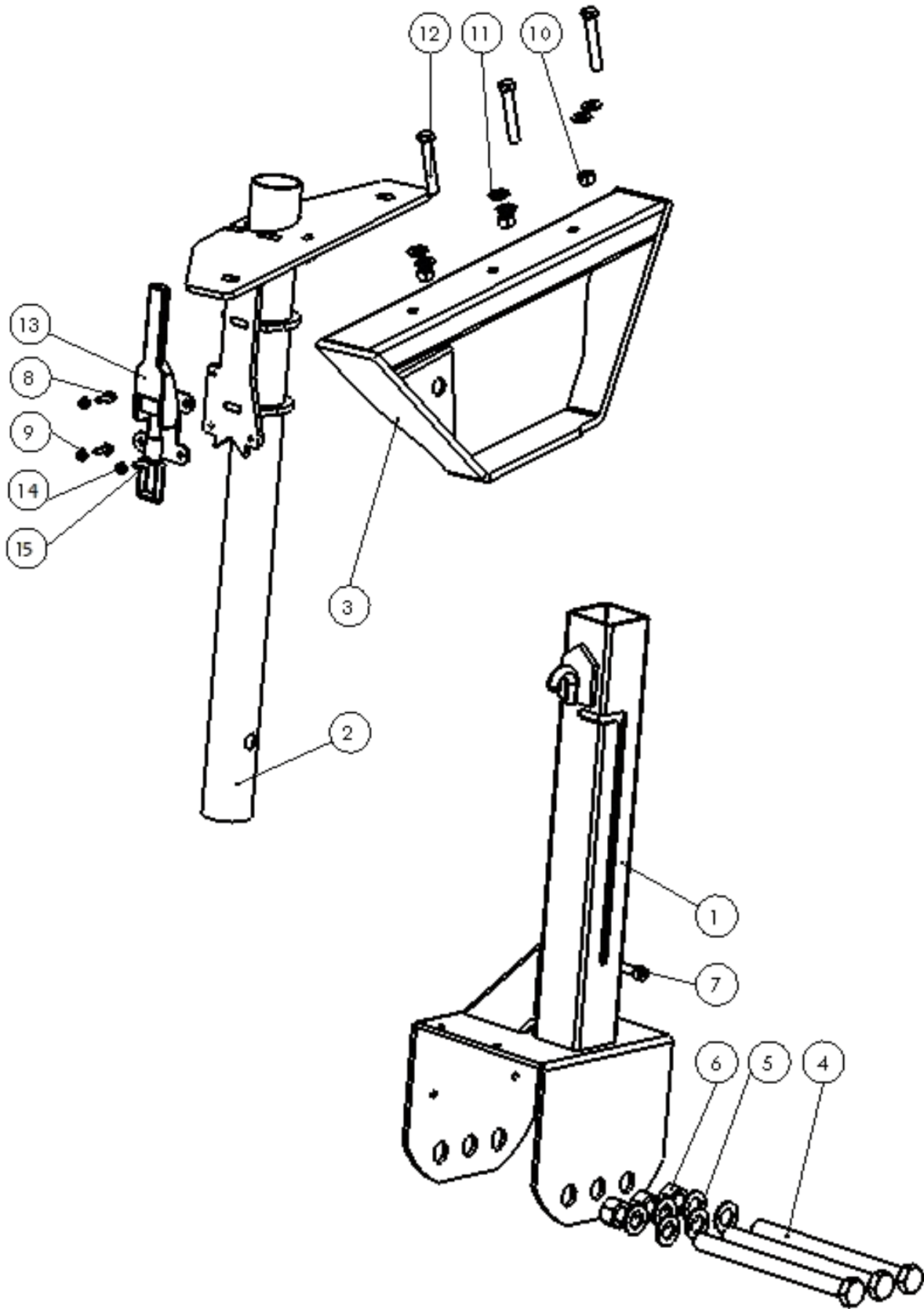
## Drive accessories



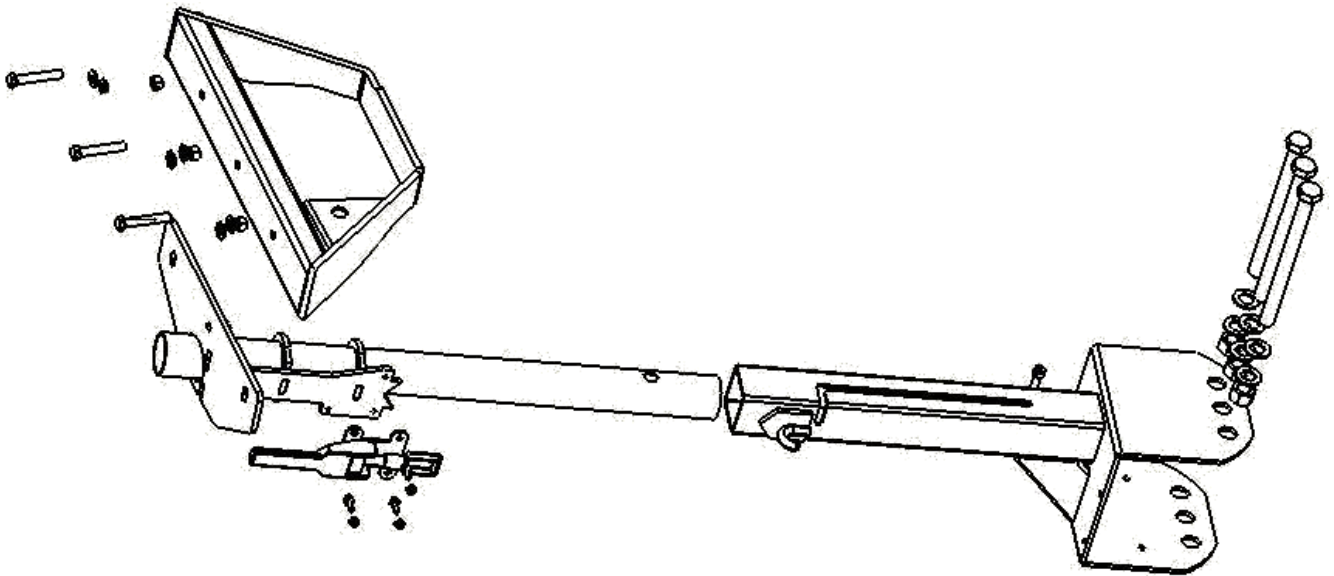
Pos.	Number	Description	Technical details	Qty.
1	18384	Spherical head M10		2
2	16104	Rod long M10×150		1
	16105	Rod short M10×110		1
3	19375	Ball head shortened M10		2
4	70007	Nut low profile	DIN936 M16	4
5	70006	Self-locking nut	DIN6923 M10	4
1-5	19920	Threaded rod with spherical head, 150 mm,		1
	19922	Threaded rod with spherical head, 110 mm,		1



## Compact mount, pivoting

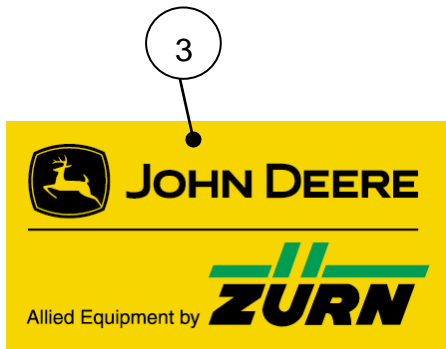
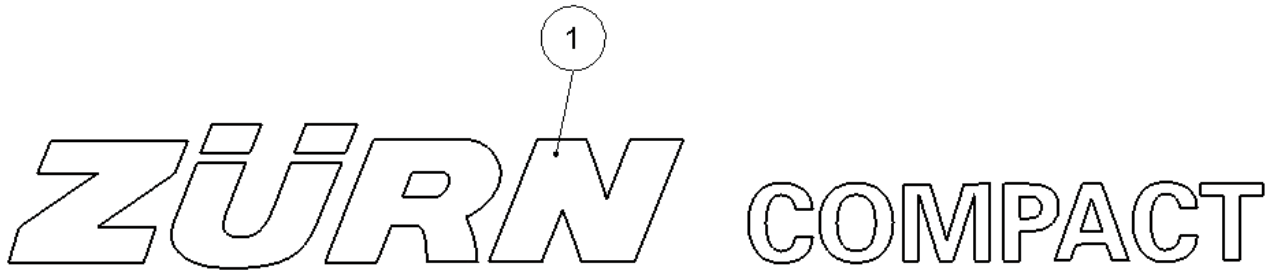


## Compact mount, pivoting



Pos.	Number	Description	Technical details	Qty.
1	16215	Welded assembly main tube		1
2	16216	Welded assembly rotating tube		1
3	16214	Welded assembly mount		1
4	70055	Hexagon-head bolt with shank	DIN 931 M20x240	2
5	70079	Washer, form	DIN125 A21	4
6	70018	Self-locking nut	DIN985 M16	2
7	70070	Cylindrical allen-head bolt	DIN912 M10x40	1
8	70098	Countersunk bolt	DIN695 M8x20	2
9	70005	Hex nut with flange	DIN6923 M8	2
10	70022	Self-locking nut	DIN985 M12	3
11	70076	Washer	DIN125 A13	6
12	70661	Hexagon-head bolt	DIN933 M12x70	3
13	19044	Eccentric tensioner		1
14	70230	Adjusting screw	DIN933 M8x25	1
15	70014	Locknut	DIN934 M8	1
1-15	16099	Compact mount JD SWW, pivoting		1

**Decals**





Pos.	Number	Description	Technical details	Qty.
1	16229	Decal Compact		1
2	16213	Decal	Nr. 14 , HXE53133	1
3	16212	Decal	JD-Zürn Allied Equipment	1
4	16203	Decal	JD	1
5	H236260	Decal		1

**EG- Konformitätserklärung nach Maschinenrichtlinie  
2006/42/EG**

Bitte sorgfältig aufbewahren, jedoch nicht im Fahrzeug

**EU CERTIFICATE OF CONFORMITY  
According to Machinery Directive 2006/42/EG**

Please keep safely, not inside the vehicle

Hiermit bestätigt die Hereby declares	<b>Zürn Harvesting GmbH &amp; Co. KG</b>	
in alleiniger Verantwortung dass das landwirtschaftliche Anbaugerät  the full responsibility for the agricultural implement	Fabrikmarke Brand	<b>Zürn Harvesting GmbH</b>
	Typ Type	<b>Seitentrenner</b>
genehmigt in approved in	<b>Schoental</b>	
am on	<b>19.01.2019</b>	
durch den by the	<b>Hersteller / manufacturer</b>	
den grundlegenden Sicherheits- und Gesundheitsanforderungen der Richtlinie 2006/42/EG entspricht. to full fill the complete safety- and health requirements according to machinery directive 2006/42/EG.		
Zur sachgerechten Umsetzung der in den EU-Richtlinien genannten Sicherheits- und Gesundheitsanforderungen wurden folgende Normen herangezogen:  For proper implementation according to the EU- Directives for health and safety requirements, the following standards were used:	<b>DIN EN ISO 4254-1 (06/06)</b>  <b>DIN EN 745 (08/99)</b>	
Geschehen zu Done at	<b>Schoental</b>	
am on	<b>05/03/17</b>	
	  Rolf Zürn Harvesting Harvesting, Geschäftsführer, CEO	

## General terms of guarantee

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Zürn Harvesting GmbH & Co. KG Kapellenstraße 1 D-74214 Schöntal-Westernhausen herewith certifies

each buyer of a new Zürn Harvesting machine purchased from an authorised dealer, that the materials and workmanship of this machine will be guaranteed to the conditions specified below, providing that the machine is put into operation and maintained in accordance with the specifications in the operating instructions.

The guarantee period is one year from the date of delivery and is valid for up to 500 operating hours within this period.

The date of the invoice to the end user as well as the date on the declaration of commissioning, signed by the dealer and customer and returned to the company are decisive.

The guarantee embraces only the reimbursement or repair of the parts and reimbursement of work time required effect the repair, based on the repair times allowed by Zürn Harvesting, under the prerequisite that the fault was determined by our technical customer service department and was acknowledged by Zürn Harvesting to be attributable to faulty materials or workmanship.

### **The following cases are exempted from guarantee:**

- Damages, that are attributable to normal wear and tear, negligence, carelessness, improper use, incorrect maintenance and/or if the machine was involved in an accident, lent to another user or put to another use than that for which it was intended.
- The guarantee will be rendered null and void if technical modifications are made to the machine without the express permission of Zürn Harvesting or if spare parts other than original Zürn Harvesting spare parts are used and/or if repairs were not carried out by an authorised dealer.
- Zürn Harvesting will accept no liability for damages to the machine or its equipment caused during transportation or loading up by any transport company and this outside the specified guarantee period. Machines, equipment and parts are shipped at the risk of the recipient.
- Zürn Harvesting will accept no responsibility for possible personal injury, e.g. for injuries to the owner of the machine or third parties.
- Further to this, Zürn Harvesting will not pay compensation for losses of harvest or cuts in profit as a result of a defect, a hidden fault or machine failure.

### **The purchaser is responsible for the following and will bear the costs:**

- The everyday maintenance of the machine, i.e. lubrication, checking and correcting oil levels, minor adjustment work, etc.
- Travelling and mileage allowances for service technicians
- Transporting the machine, the parts or equipment to the place of repair and returning them to the place of use
- Expendable parts like drive belts, tyres, blades, cutter discs, disc clutches, etc. are not covered by the guarantee.

## General terms of guarantee

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**The terms of the guarantee are dependent upon precise observance of the following regulations by both the dealer and the purchaser:**

- The machine must be put into service for the first time by the dealer, in accordance with Zürn Harvesting regulations.
- The guarantee card (machine card) completed by the dealer and customer must be returned to Zürn Harvesting by post or e-mail as soon as the machine has been delivered to the customer.
- Applications for guarantee claims must be formulated on the corresponding Zürn Harvesting form and presented to Zürn Harvesting by the dealer within one calendar month.
- The application must be completed legibly and must contain the following information:
  - Name, address and dealer customer number
  - Name and address of the customer
  - Exact machine type and designation
  - Complete serial number of the machine
  - Date of delivery to the customer
  - Date of the claim
  - Number of operating hours or acreage harvested by the machine
  - Exact description of the damage and information regarding the probable cause
  - Quantity, item numbers and description of damaged parts
  - Invoice number and date of the parts replaced
- The parts reported as damaged must be returned to Zürn Harvesting free of charge for appraisal, complete with a copy of the guarantee claim application. Any costs incurred for returning the parts replaced will be borne by the sender.
- Use and maintenance of the machine must comply with the specifications in the operating instructions. Lubricants used must be of the qualities and quantities of those specified by Zürn Harvesting.
- The decision of Zürn Harvesting is, irrespective of the guarantee claim application, final and irrevocable and the purchaser is obliged to accept this decision.
- If the guarantee claim application is refused, the dealer has a period of 15 days, starting from the day the Zürn Harvesting decision was received, to demand return of the damaged parts. Once this period has elapsed, the parts will be systematically destroyed.

### **Additional provisions and restriction of liability**

- The guarantee is non-transferable to third parties without the prior, written permission of Zürn Harvesting.
- The dealer has neither the right nor the authority to enter into a commitment in the name of Zürn Harvesting, whether expressly or implied.
- The technical support for repair of the machine given by Zürn Harvesting or their representatives excludes any further liability whatsoever by Zürn Harvesting and has no influence whatsoever on the existing terms of guarantee.
- Zürn Harvesting reserves the right to modify the design of the machine without prior notice. It is not obliged to transfer such modifications to machine which have already been sold or are in use.
- Furthermore, due to the rapid development of the state of the art, no guarantee can be given for the machine descriptions contained in these operating instructions or other technical leaflets and data sheets.
- The existing guarantee excludes any further obligations by Zürn Harvesting, be it a legal or contractual obligation, whether expressly or implied. The obligations of Zürn Harvesting can not under any circumstances exceed the provisions specified in the previous paragraphs. Zürn Harvesting will accept no liability in particular and will not pay compensation for materials and personal injury, loss of crops or liabilities incurred in any way or for any consequences of whatever nature resulting from hidden defects or constructional faults within the framework of the existing terms of contract

## Torques for metric bolts

Bolts	Grade 4.8				Grade 8.8 or 9.8				Grade 10.9				Grade 12.9			
	Oiled <sub>a</sub>		Dry <sub>b</sub>		Oiled		Dry <sub>b</sub>		Oiled		Dry <sub>b</sub>		Oiled		Dry <sub>b</sub>	
Size	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	80	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

The tightening torques given are guideline values. Do NOT use these values if a different torque or another securing method is specified for a specific application. For stainless steel bolts and nuts for stirrup bolts, see specific instructions. Tighten locking nuts with plastic insert or edge-raised steel locking nuts to the corresponding torque for dry bolts and nuts given in the table unless otherwise instructed.

Shear pins are designed to break at a certain load. When replacing shear pins, use only pins of the same grade. When replacing bolts and nuts, make sure that equivalent parts of the same or a higher grade are used. Tighten higher-grade nuts and bolts to the same torque as the originally used parts. Make sure that the thread is clean and the bolts correctly fitted. If possible, oil normal and galvanised nuts and bolts (except for locking nuts and wheel studs or nuts) unless specified otherwise for the specific application.

“Oiled” means that a lubricant, such as engine oil, is applied to the bolts or that phosphatized or oiled bolts with a size from M20 are used.

“Dry” means the use of normal or galvanised bolts without lubrication or bolts with a size between M6 and M18 that are zinc-coated.

## Contact

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Ersatzteilbestellung / Spare parts order / Commande des pièces:

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Fax. 0049 (0) 7943 / 9105-33

E-Mail: [parts@zuern.de](mailto:parts@zuern.de)



**ZÜRN**

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