



# TRACTOR ATTACHMENT SYSTEM TAS

- ▶ Simple coupling
- ▶ Flexible
- ▶ Quick
- ▶ Economical

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# SIMPLE COUPLING – FLEXIBLE, QUICK AND ECONOMICAL

The safe option!

**Walterscheid is familiar with the challenges facing farming.**

**We talk to farmers throughout the world in our constant efforts to improve the Tractor Attachment System.**

**In this way, we meet the demands of farmers for economical, convenient and safe working implements.**

## **We assume responsibility!**

Modern farming faces an extreme challenge: more and more people need to be fed off the available arable and grazing land. Reaping ever higher quality and conserving natural resources at the same time – that is the motto under which Walterscheid doesn't just accompany the change in farming, but takes it a decisive step forwards.

Our innovations are milestones in agritechnical engineering: Walterscheid won awards for the first lower link hook that can be operated entirely from the driver's seat. The "hitch systems" product range now offered by the company introduced the KU 2000 automatic clevis-type coupling in agritechnical engineering.

Greater productivity and functionality of agricultural machinery is the goal of our development engineers. We want farmers to be able to work efficiently, conveniently and safely. We assume the responsibility for that when designing, manufacturing and testing our products.

## **We take agriculture forwards!**

The Tractor Attachment System handles key functions in the farmer's workflow: coupling, adjusting, stabilising and hitching. Implements and machines are coupled and uncoupled conveniently, quickly and safely from the driver's seat, implements are optimally set for the respective function, and both tractor and implement are protected against material-damaging and dangerous impacts and shocks.

The Walterscheid TAS range encompasses all the elements of the threepoint linkage: complete lower links, lift rods, top links and stabilisation systems, as well as modern hitch systems.

# TRACTOR ATTACHMENT SYSTEM TAS

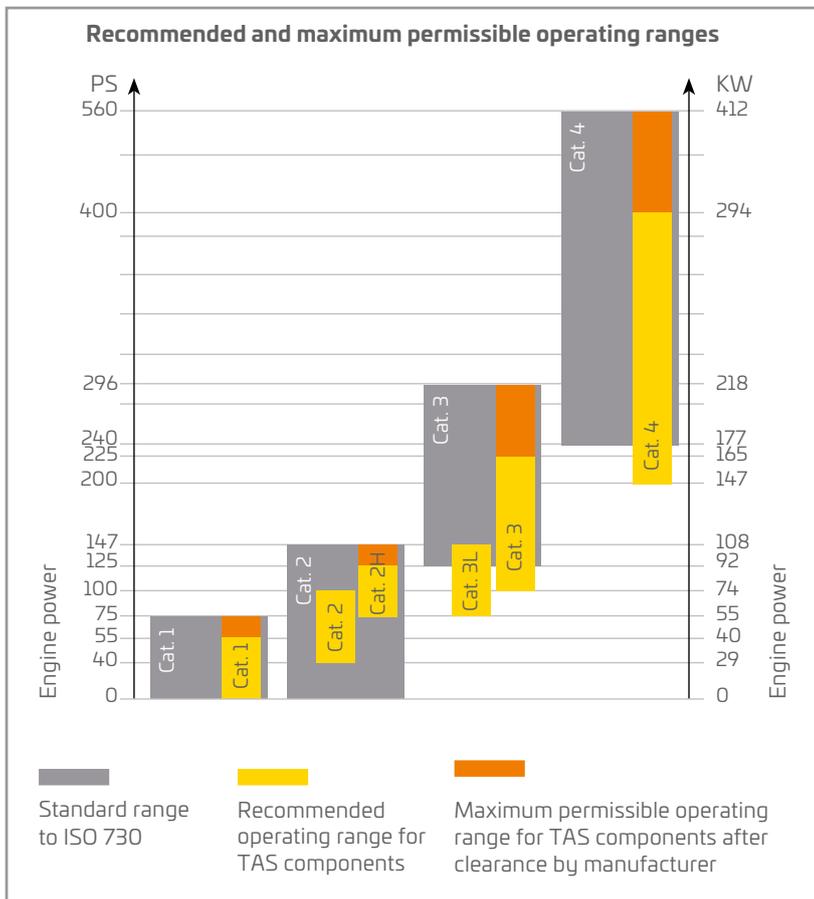
The demands on the Tractor Attachment System are as varied as farming itself.

Consequently, when developing TAS components, we give consideration to all the factors that have an influence on farming practice.

Among other things, these factors include the trend towards larger farm sizes and longer machine operating times, the changing range of crops grown, and the increasing demand for higher efficiency and lower working costs. All this has a concrete impact on agri-technical concepts.

For instance, the working widths – and consequently the machine weights – have steadily increased in recent years. In addition to which, there are growing demands on hitch and drive systems. New hitch types have also emerged.

Walterscheid tackles these challenges. “We have the right concept for every application – safe and tailored to the individual operational requirements of contractors and farming businesses.”



## COUPLING



### There's no need to get up!

Coupling and uncoupling implements conveniently from the driver's seat: that's no problem with Walterscheid hooks for top and lower links. Numerous time-consuming and hazardous work steps between the tractor and the implement are eliminated. Walterscheid hooks withstand extremely high loads, are easy to operate and safe.

They are made of high-strength forged steel and designed specially to absorb high tensile, compressive and lateral forces. As a result, they stand up to all the stresses occurring between the tractor and the implement in the work process. As the partner of numerous tractor manufacturers, Walterscheid also designs and builds complete lower links with hooks, telescopic ends or ball ends.



## THE LOWER LINK HOOK

### Safe locking – convenient handling

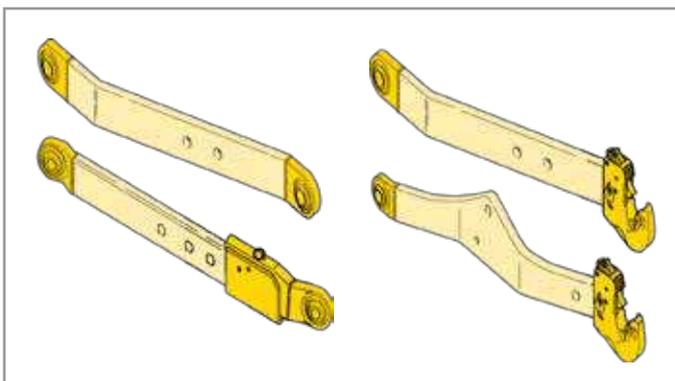
The hook never opens accidentally. The lock can only be released via the opening lever: by cable, by hand or, in future, by switch from the driver's seat.

### Simple coupling

The lower link hook facilitates coupling: special centring contours guide the ball on the implement side safely into the mouth of the hook. The tractor does not have to be driven up to the coupling points on the machine to within the millimetre.

### Superior design

The hook is of slender, compact design. The mechanical equipment consists of just a few individual parts and is accommodated in the closed housing for protection against shocks and dirt. Conventional tools can be used to replace the locking device components separately without having to dismantle the lower link.



Both the lower link hooks and the tractor- and implement-side eyebolts are available as spare parts and for retrofitting.



Comparison	Standard ball bushes	Ball guide cone	Clamp-type guide cone	Spacer disk	Heavy-duty ball bushes
<b>Function/ Benefits</b>	Ball bush for standard 3-point applications. Ball bush can rotate freely on implement pin.	Ball bush for most 3-point applications, with integrated guide cone for improved coupling. Ball bush cannot rotate on implement pin.	Guide cone for improved coupling of the ball bush. In conjunction with standard or heavy-duty ball bush. Ball bush can rotate freely on implement pin.	Spacer disk for reducing lateral ball play.	Ball bush for heavy-duty 3-point applications. Ball bush can rotate freely on implement pin.
<b>Tractor types</b>	All types with hook	All types with hook	All types with hook	All types	All types with hook
<b>Implement types</b>	All 3-point implements	All 3-point implements	All 3-point implements of Cat. 2 and 3, heavy semi-mounted implements in particular	All 3-point implements	All 3-point implements
<b>Usage</b>	Light to medium duty	Light to medium duty	Medium to heavy duty	Light to medium duty	Medium to heavy duty
<b>Pin bearing</b>	On both sides	On one side	On one side	On one side/both sides	On both sides
<b>Assembly</b>	Remove pin and mount through ball bush.	Slip ball guide cone onto pin and secure with linchpin.	Slip ball bush and clamp-type guide cone onto pin and secure with screws ("clamp").	Slip spacer disk onto pin and secure together with ball bush.	Remove pin and mount through ball bush.



### Walterscheid accessories – Original in every detail!

Only ever use original Walterscheid accessories, since all Walterscheid components are optimally coordinated. Ball bushes, ball guide cones, etc. of inferior quality constitute a safety risk for which Walterscheid cannot assume any liability.



### THE TOP LINK HOOK

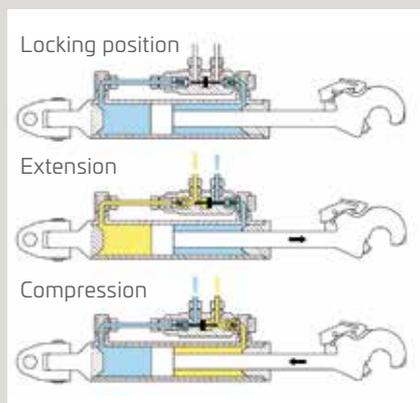
The Walterscheid top link hook establishes a particularly safe connection between tractor and implement. The top link hook guarantees maximum enclosure of the implement-side ball, reliably preventing loss even when the overall system is exposed to high loads.

The special safety lock is never released accidentally and can only be opened by cable from the driver's seat or by hand. Not only the mechanical top links are equipped with original Walterscheid hooks, but also all hydraulic top links in Categories 2/63 to 4/130.

Hooks with threaded shank are available in Cat. 1 – Cat. 4 versions.

The top link hook with integrally forged threaded shank also comes as a retrofit and spare part for spindle top links.

## ADJUSTING

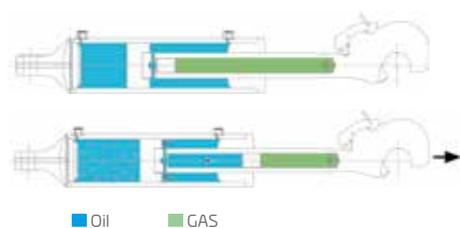


### Twin-type non-return valve – Safe in use and gentle on the equipment!

The technology of the hydraulic top link is based on a double-acting cylinder with twintype non-return valve made of solid steel. The valve block locks the set top link length, even during extended breaks, and prevents the transmission of shock loads to the tractor's hydraulic system.

### INTEGRATED SHOCK ABSORBER

In addition to standard features, the hydraulic top link with shock absorber is capable of absorbing shocks caused by bouncing implements during operation on uneven ground.



### Implements at the ready!

Optimum adjustment: Walterscheid top links and lift rods get implements into the right working position. They offer various degrees of convenience and come in different performance classes – tailored to the different needs of farmers.

While mechanical top links with hook or eyebolt have to be set to the right dimension by hand, hydraulic top links are particularly convenient to operate: just set the top link to the required length from the driver's seat – either with or without an attached implement. Leading manufacturers also equip their tractors with Walterscheid lift rods, which make for the right connection between lifting shaft and lower link. They move the lower links and are used to set the lateral inclination of the implement.

## HYDRAULIC TOP LINKS FOR ALL POWER RANGES

The range of Walterscheid hydraulic top links completely covers the different requirements of modern agriculture. The key elements of all hydraulic top links from Walterscheid are not only high-quality cylinders and special sealing systems, but also the original Walterscheid hook and the pilot-controlled, twin-type non-return valve.

### HYDRAULIC TOP LINK WITH INTEGRATED SHOCK ABSORBER

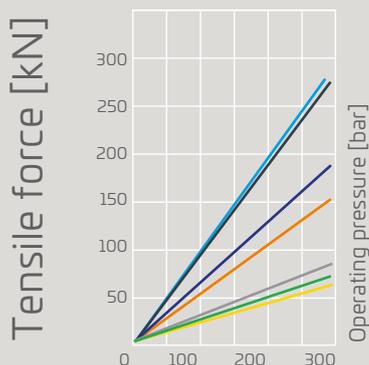
#### Function:

- ▶ Impact loads caused by the implement are absorbed
- ▶ Hydraulic top links with shock absorber are interchangeable with standard top links and can be installed without any additional components
- ▶ Installation does not require special components or additional space when compared to standard hydraulic top links
- ▶ Positioning of mounted implements during operation
- ▶ Maintaining a secure working position without continuous hydraulic actuation of the return valve

#### Advantages:

Impact loads caused by bouncing implements are separated from the tractor. This leads to:

- ▶ Better driving performance due to optimised ground contact of the front axle: safer driving conditions, increased grip, higher productivity
- ▶ Improved driving comfort
- ▶ Reduced wear of linkage components



POWER RANGES	eyebolt	swivelling eyebolt	swivelling eyebolt with integrated shock absorber
HOL Cat. 2/63	<90 PS / <66 kW	<100 PS / <74 kW	—
HOL Cat. 3/70	<140 PS / <103 kW	<150 PS / <110 kW	—
HOL Cat. 3/90	—	<250 PS / <184 kW	—
HOL Cat. 4/120	—	<400 PS / <254 kW	—
HOL Cat. 3/70DS	—	—	<150 PS / <110 kW
HOL Cat. 3/105DS	—	—	<200 PS / <147 kW
HOL Cat. 4/130DS	—	—	<400 PS / <254 kW

## HYDRAULIC TOP LINKS

Hydraulic top links with	EYEBOLT	SWIVELLING EYEBOLT	SWIVELLING EYEBOLT with integrated shock absorber
			
Available with different connecting dimensions and adjustment ranges.	Cat. 2/63 Cat. 3/70	Cat. 2/63 Cat. 3/70 Cat. 3/90 Cat. 4/120*	Cat. 3/70DS Cat. 3/105DS Cat. 4/130DS
Equipped with the original Walterscheid hook	✓	✓	✓
Convenient operation by cable	✓	✓	✓
Wide range of accessories	✓	✓	✓
Long service life	✓	✓	✓
Components can be replaced separately	✓	✓	✓
Valve block protected by special, reinforced clip		✓	✓
Optional also with integrated valve block		** ✓	
Complete with marking bar and label, ball, cable, clip and tractor-side retainer		✓	✓
Versatile use due to interchangeable swivelling eyebolt		✓	✓

\* optional also with implementside eyebolt Cat. 4/3 available \*\* Cat. 3/90

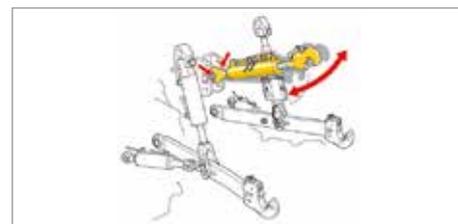
## SPINDLE TOP LINKS

- ▶ Equipped with the original Walterscheid hook
- ▶ Special anti-rotation lock to prevent unintentional change of length
- ▶ Versatile use due to a variety of connection options
- ▶ Wide choice of lengths and adjustment ranges
- ▶ Long service life due to anti-corrosion treatment and lubricating facility
- ▶ Available for all tractor types
- ▶ All individual components available as spare parts or for retrofitting



### Important note:

Some tractor types do not offer enough space for top links with eyebolt in the tractor-side mount. Top links with swivelling eyebolt should be used in these cases.





### Convenient stability

Every farmer is familiar with that scary moment when an implement swings out in a narrow street or on difficult terrain. Swinging implements can cause serious damage in a matter of seconds: to parked cars, buildings or the farmer's own vehicles. In the worst case, someone may even be injured. That's why good stabilisation of the lower links, and thus of the whole combination, is indispensable for transport and work alike – for your own safety and that of others.

The solutions commonly encountered today, such as chains and simple struts, have to be operated manually in the hazard area behind and under the tractor while the implement is attached. That's not only awkward and time-consuming, it's also dangerous. The result: stabilisers of this kind are often not used in practice, and the risk of accidents and greater wear on the three-point linkage and the tyres is accepted.

Only if stabilisers are convenient to operate and work dependably are they actually used in everyday farming. Walterscheid's ASST-B and HGST stabilisation systems not only operate automatically, they also make many work steps easier in the field. Walterscheid offers the automatic ASST-B lateral stabiliser and – for use with heavy implements or on difficult slopes, for instance – the HGST lateral stabiliser with hydraulic control.

Both systems are geared to high standards of convenience and safety.



### Demands on modern stabilisers

- ▶ Safe transport
- ▶ Stability on slopes
- ▶ Automatic switch between rigid and floating position
- ▶ No handling in the hazard area behind and under the tractor with attached implement
- ▶ Reliable steering stability even on tough terrain
- ▶ Convenient coupling due to simple setting of the width of spread
- ▶ Low susceptibility to dirt
- ▶ Reduction of wear on the three-point linkage
- ▶ Stabilisation independent of the lift rod length



Floating position



Rigid position

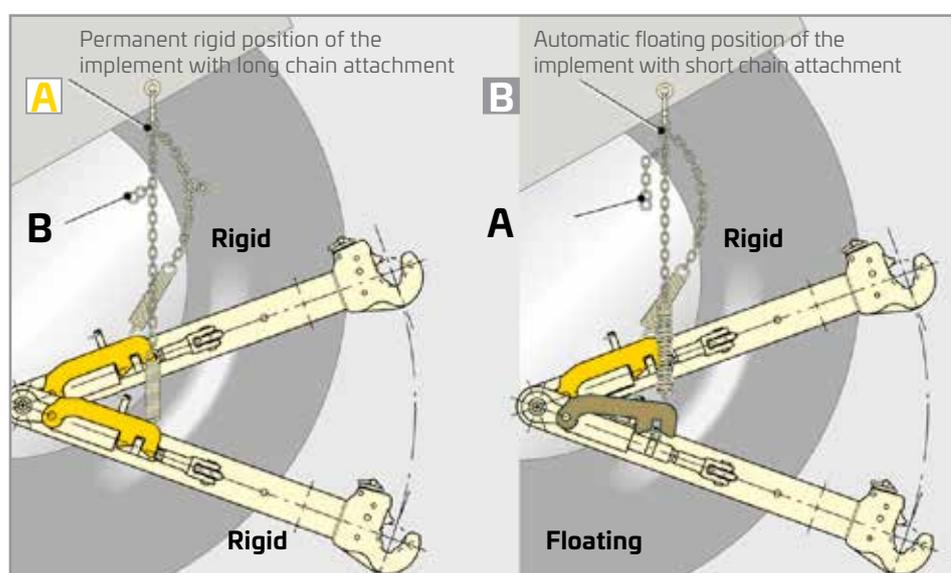
## EASILY AND QUICKLY RETROFITTED: STABILISING: ASST-B



### Automatic lateral stabiliser ASST-B

The automatic lateral stabilisers stabilise every lower link against tensile and compressive forces, and thus also the attached implement. During work, switching between rigid and floating position takes place automatically during lifting and lowering of the implement.

During lifting, the implement moves through the centre position, where it engages safely, then remaining stable. The lift height at which stabilisation is to start is pre-set by adjusting the chain length outside the hazard area behind the tractor and can thus be adapted to suit every implement and application.



Rigid position



Floating position

### Width of spread

The width of spread of the lower link is infinitely variable and is set simply by turning the forked rod. The special design rules out the possibility of the width of spread being changed unintentionally.

### ASST-B product features

- ▶ Automatic switching between rigid and floating position when raising and lowering the power lift
- ▶ Stabilisation is set by attaching a chain, without having to enter the hazard area
- ▶ Simple coupling and uncoupling: the width of spread of the lower links is maintained at the set distance by springs
- ▶ Automatic release during lowering of the implement simplifies working operations in the field
- ▶ Improves road safety during transport
- ▶ Retrofit system for installation by the user for over 300 tractors

### Note:

With all stabilisers, always pay attention to correct setting of the width of spread. Incorrect settings can result in increased wear on the stabilisers or the lower link hooks!

## STABILISING: HGST



Hydraulically controlled lateral stabiliser HGST

### For the toughest demands: hydraulically controlled lateral stabiliser HGST

The hydraulically controlled lateral stabiliser HGST automatically centres and stabilises the tractor's three-point linkage, and thus the implement, at any, freely selectable lift height.

The HGST is operated from the driver's seat by electronic controls: the lift height at which stabilisation is to start is infinitely variable and is set by means of a rotary knob or the on-board electronic. The lateral stabilisers actively push the implement into the required central position absolutely smoothly and stabilise it completely without play. The system can be switched regardless of load. The individual width of spread is set before coupling and thus covers all requirements.

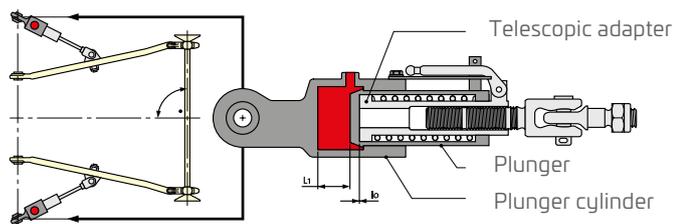
The HGST is available as a standard option from a number of tractor manufacturers, but can also be retrofitted on many tractors with loadsensing systems. It can be installed by your Walterscheid Service Partner, who will be pleased to help and advise you.

### HGST product features

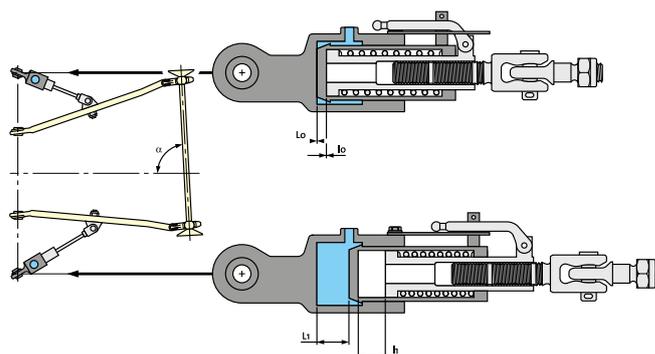
- ▶ Automatic switching between rigid and floating position when raising and lowering the power lift
- ▶ Permanent rigid or floating position possible at any time
- ▶ Convenient control from the driver's seat
- ▶ Centres actively and stabilises completely smoothly and with absolutely no play
- ▶ Minimises wear on the three-point linkage and the tyres
- ▶ Offers maximum safety on slopes and on the road
- ▶ Simplifies and rationalises work on difficult terrain
- ▶ Integrated in the tractor's hydraulic circuit without occupying a control valve



Lower link rigid position – Pressure on both cylinders



Lower link floating position – Both cylinders pressureless



## STABILISING: HVST

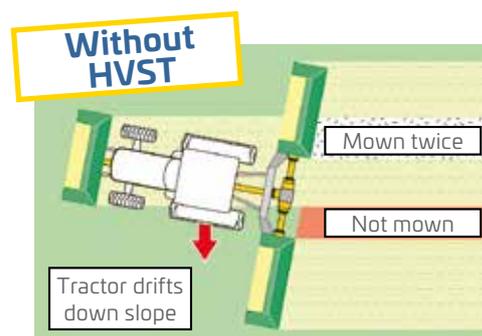
### Lateral displacement of the three-point linkage: hydraulically adjustable HVST

The hydraulically adjustable lateral stabiliser HVST allows the complete three-point linkage, including the attached implement, to be laterally displaced by up to 25 cm while in motion – thus ensuring full cutting on mowing combinations if the tractor drifts away, for example. While the ASST-B or HGST will hold the attached implement in an absolutely play-free centre position in extreme terrain conditions, these devices cannot prevent the tractor and the implement drifting away together. The engineers at Walterscheid have developed a solution to deal with this situation: the HVST.

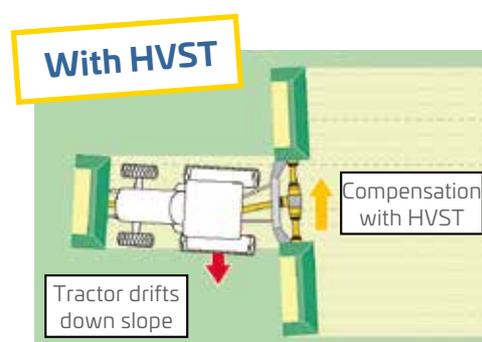


The HVST can be installed in the same space as the automatic lateral stabiliser, meaning that components from the modular ASST system, e.g. brackets, can also be used.

In contrast to the HGST, no load-sensing system is necessary, and only one cylinder is needed. Two hoses are simply connected to a double-acting control valve, and the HVST can be conveniently and safely operated from the cab.



Pattern formation when mowing on slopes without HVST



Compensation of the miscut with HVST: the result is a uniform mown area

Comparison	ASST-B	HGST	HVST
<b>Terrain/ Application</b>	For any terrain and road journeys	For any terrain, especially on slopes, and for lengthy road journeys	For any terrain, especially on slopes and when cornering with combinations
<b>Principle</b>	Automatic/mechanical	Automatic/hydraulic, without occupying a control valve	Manual/hydraulic, via existing control valve
<b>Benefits</b>	Simple technology, automatic switching between floating/rigid position, play-free travel	Fully automatic switching between floating/rigid position, absolutely play-free travel, even on extreme slopes, minimises wear on tyres and three-point linkage	Compensates for miscuts/missed areas by laterally displaying the three-point linkage or implements that need to be guided (row crops)
<b>Convenience</b>	Easily adjustable for all applications	Good to moderate	Control from the driver's seat
<b>Tractor types</b>	Possible on over 300 types	All types with hydraulic load-sensing system	Same as ASST-B
<b>Attached implements</b>	Any	Any	Mowing combinations, implements for row crops, etc.
<b>Installation requirements</b>	Installation by user/workshop	Workshop, load-sensing system	Installation by user/workshop

# THE AUTOMATIC CLEVIS-TYPE COUPLING KU 2000

The Type KU 2000 automatic clevis-type coupling is an automatic hitch. The lever trigger system is used for coupling, i.e. the coupling procedure is triggered by moving a trailer ring into the clevis and pressing back the trigger lever.

### The key features:

- ▶ The clevis is made of forged, high-strength steel.
- ▶ A freely rotating coupling pin makes for low, uniform wear.
- ▶ Guidance of the coupling pin over a long distance, and a rapid closing procedure.
- ▶ Two safety pins, visible from both sides, avoid shock loads on the lifting mechanism.
- ▶ The coupling pin engages positively, not non-positively.
- ▶ Constant torque when opening – optimally suitable for remote control.
- ▶ The separate hitch head is of cast design and can be replaced independently of the clevis.

As standard, all couplings are shipped with a coupling point optimised for 40 mm trailer rings. On request, or to cater to special regional requirements, couplings can also be supplied with different coupling points to suit all trailer rings available on the market.





## BALL PRODUCTS

### Greater convenience on ball-type hitches – the 80 mm ball products.

The ball-type hitch offers numerous advantages. Above all, high vertical loads can be transmitted. In addition, a play-free connection is established between tractor and implement. All manually operated ball-type hitches are equipped with a retainer that can be adjusted without tools.

#### Technical advantages of the 80 mm ball products at a glance

- ▶ The retainer can be pivoted laterally, making for sufficient room for hitching. The forged retainer can absorb even higher negative vertical loads. The fact that the retainer can be adjusted without tools is a unique feature.
- ▶ The 80 mm ball has a press fit, rather than being screwed in. Stripping of the threads on the ball shank is theoretically impossible as a result. The ball can be replaced in the event of wear.
- ▶ The trailer rings are sufficiently undercut. Compared to cast designs, this results in even greater angular manoeuvrability, beyond the ISO 24347 standard.

In contrast to the trailer sockets customary on the market, Walterscheid trailer sockets are forged without exception. This production method results in even less wear, and vertical loads of up to 4.5 t are possible. The lubrication circuit is located on the inside of the trailer socket to permit lubrication in hitched state.

## IMPLEMENT-SIDE DRAWBAR DEVICES

### Optimum connection on the implement side.

In addition to various flange versions, trailer sockets for welding in and angular attachment are also available.



Flange ball KFD



Ball-type drawbar KBa



Retainer



Coupler bracket KK



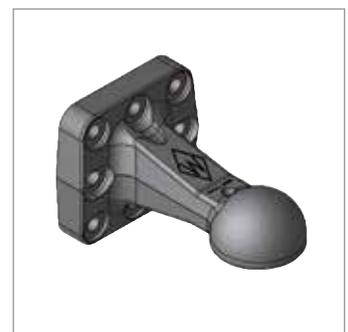
Ball-type clevis KI



Ball frame KB



Trailer rings with flange



Trailer socket ZKK 80

## COUPLER BRACKETS

### Coupler brackets from Walterscheid offer an impressive variety of products

The following ranges are available:

- ▶ Short and long coupler brackets
- ▶ Coupler brackets with 80 mm ball and guide
- ▶ Coupler brackets with piton-fix
- ▶ Coupler brackets with drawbar support



Coupler bracket with piton-fix – F



Coupler bracket with drawbar support – VZP



Coupler bracket, short – K



Coupler bracket, long – L



Coupler bracket with 80 mm ball – KK

## ACCESSORIES AND COMPONENTS

### Walterscheid offers a comprehensive range of accessories

The following ranges are available:

- ▶ Forced-steering components for coupler brackets, ball-type drawbars and ball frames
- ▶ Spareparts and unique solutions as ball-type soccets, drawbar soccets, universal clevis carriers, ball-type traverse and a wide range of implement side coupling devices



Ball-type drawbar with forced steering



The right solution to every hitching problem – our expert engineers will be more than pleased to help.



Coupler bracket with lowered forced steering device

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# WALTERSCHEID INSIDE –

**Our driveline, hitch and attachment systems provide  
for higher efficiencies of agricultural machinery.**

Innovations and technologies from Walterscheid such as the first hydraulic top link with integrated shock absorber increase the efficiency of agricultural machinery. In addition, our systems improve comfort and safety, thus making lasting contributions to increasing productivity.

- ▶ AWARE OF THE **FUTURE.**
- ▶ DEVELOPING **IDEAS.**
- ▶ LIVING **TECHNOLOGY.**
- ▶ MASTERING **CHALLENGES.**



Walterscheid  
– the original