



Attachments for construction equipment
XTRATILT ROTOBX TILTROTATOR

BETTER WITHOUT
CYLINDER

www.hks-partner.com

Good reasons to purchase HKS attachments

1. Our attachments increase the cost-effectiveness of your excavator

With an attachment by HKS, you can move your attachment tools into many new operating positions. Only the attachment pivots or rotates to position the tool, not your excavator. This prevents site damage and saves fuel.

2. Durable quality and reliability are a given!

We manufacture our attachments in our own facility. This way, we maintain control over quality and ensure that you get a durable product. In addition, our attachments are "Made in Germany" with German quality and the greatest precision.

3. Good service for your satisfaction

Our service team provides on-site support everywhere in Germany. In addition, we have a global partner network that can help you if you have problems.

4. Technically innovative and solution-oriented

The connections between our attachments and your excavators and quick couplers are customized. Each dipperstick connection is produced for optimum kinematics and to ensure the greatest tear strength and breakaway torque.

5. Consistent performance ensures smooth operation

Even after many operating hours, the pivot force remains constant and consistent. Neither adjustments nor lubrication are necessary. Save downtime and costs.

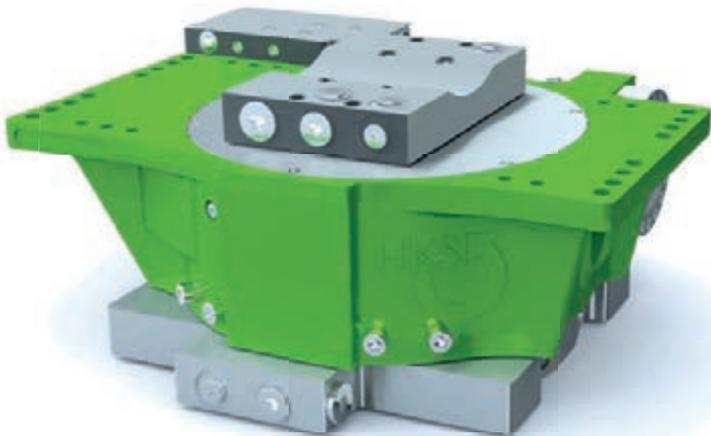
An overview of our products



TILTROTATOR

The TILTROTATOR enables you to tilt your attachment $\pm 55^\circ$ (even higher by request) in both directions and rotate endlessly at the same time. Position your attachment, not your excavator. That saves lots of time and fuel.

› Page 14



ROTOBox

The infinite 360° rotation of the RotoBox ensures that you can complete your required tasks in the best way possible. You can always rotate your tool exactly how you need to.

› Page 20



XTRATILT

Pivot your attachment tools up to 90° in either direction. This way your tool is always in the correct operating position. The maintenance-free XTRATILT consists of four components, so it is very durable and downtime is the thing of the past.

› Page 26

New

Tired of hoses? The new external XtraFlow oil feedthrough on the XtraTilt is now available as an option

Retrofit capability, inexpensive, and maintenance-free – advantages that you only have with an external oil feedthrough. The oil feedthrough is a reliable replacement for your hoses. If you already have an XtraTilt, now you can retrofit it with XtraFlow. This patented solution is adapted perfectly for the XtraTilt and your quick coupler so that the coupler's performance stays the same. And this product, like all the others by HKS, is high quality and durable.



Retrofit capability

The XtraTilts already in service can also be retrofitted with an external oil feedthrough.



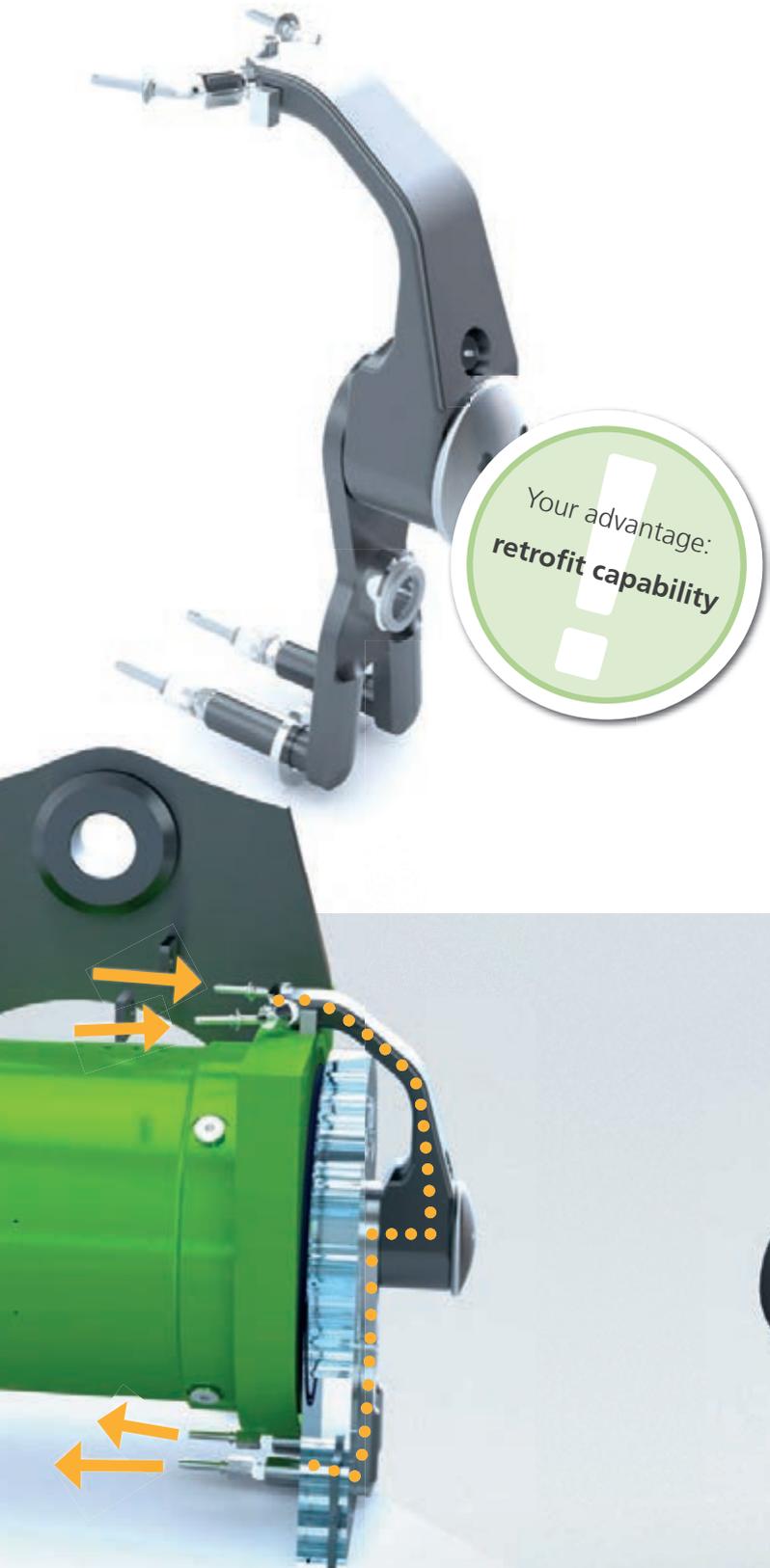
Maintenance-free

We developed the XtraFlow oil feedthrough to be maintenance-free, so that your XtraTilt also remains maintenance-free.



Inexpensive and long-lasting

Because the oil feedthrough is not like other solutions already on the market where the feedthrough runs through the base and shaft, if there is a problem, you don't have to replace the entire rotary motor. Our production process is also more cost-effective, which benefits you.



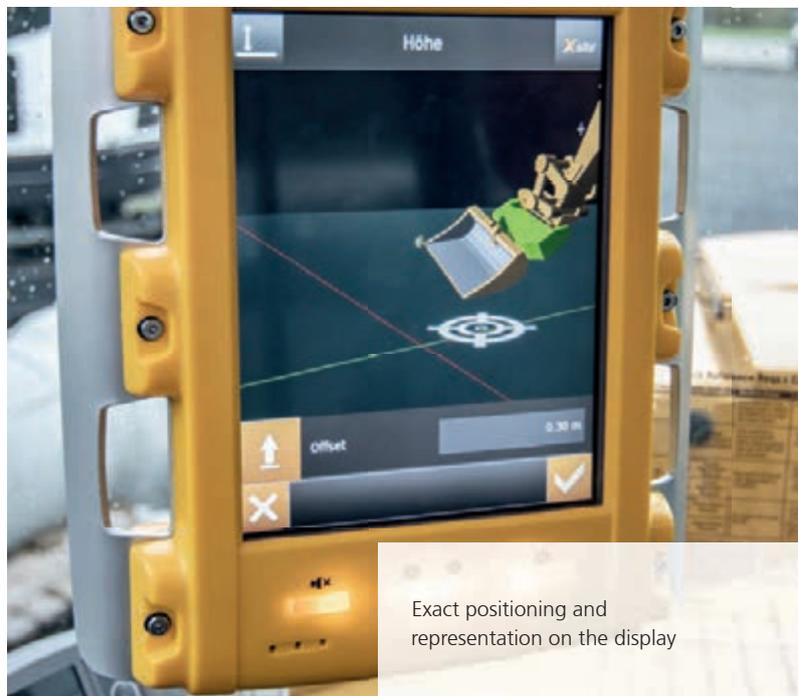


The HKS sensor – 2D and 3D/GPS-ready

The HKS sensor measures the rotation position of the attachment ($\pm 1^\circ$) and then transmits the exact position data of the TiltRotator, XtraTilt or RotoBox and respective attachment directly to the excavator operator cab. The inclination sensor for the tilting movements made by an XtraTilt has already been integrated by the manufacturers of GPS control systems. However, with the new sensor from HKS you can now also detect the movements of a RotoBox and a TiltRotator for control systems.

Details

- ✓ Rotation position ($\pm 1^\circ$)
- ✓ Suitable for use with any attachment
- ✓ **Retrofit capability for all RotoBoxes**
- ✓ Can be integrated into 2D and 3D/GPS controls
- ✓ Saves time because staking the area is no longer necessary



Exact positioning and representation on the display

Learn from the pros!

We regularly attend both national and international construction machinery trade fairs so that you can see the HKS Construction Technology products live and in action.

At the fairs, we present our products with various buckets and numerous other attachments (e.g. stone mills, compressor plates, grabs, etc.)

As much practice as possible, as much theory as necessary – we are happy to offer training and support for working with our products.

In addition to the trade fairs, you can always make an appointment to test drive an excavator on our demonstration site.

We look forward to your visit!

› demopark@hks-partner.com

Equipment for in-house exhibitions and demonstrations are available by request.



The following HKS products are available for the respective excavators:

- ✓ Trench bucket
- ✓ Small bucket
- ✓ Compactor
- ✓ Grab
- ✓ Mill

› **TILTROTATOR** 8 t excavator

› **ROTOBox** 10 t excavator



Training at HKS.

Gripper available as an option

Today it is impossible to imagine working without a gripper as an additional tool. No matter if curbstones need to be moved or pipe laid, a gripper increases the tasks you can do at your construction site. As an option at HKS you receive the appropriate gripper for your XtraTilt, RotoBox, or TiltRotator. Slim design, powerful three-claw technology and robust housing ensure durability and productivity on every construction site. The gripper can also be easily retrofitted. This way you can add a gripper to products already in service.



Environmentally sound with organic lubricant

All of the seals we install are suitable for use with organic lubricants. Check with our customer consultants to see if your organic lubricant is appropriate for use with our standard seals. We would also be happy to adapt the seals for your specific requirements.



The HKS TiltRotator is optimally suited for underwater applications. Special seals make this possible.

Adapted to your needs

Standard isn't our thing – our products are individually designed and assembled for you and your excavator. That means that despite additional attachments (XtraTilt, RotoBox, or TiltRotator), we can provide optimum kinematics for your attachment and greater tear strength and breakaway torque.

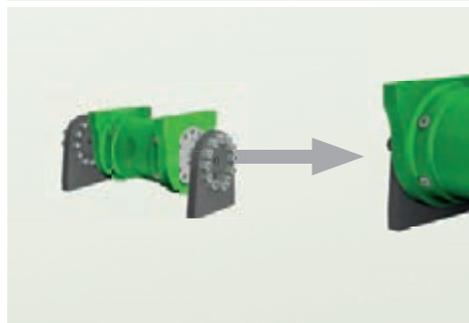
We adapt each K version to your excavator. We design each connection to the excavator based on customer-specific needs. You can also ask us about purpose-built items to suit your requirements.

XTRATILT **BETTER WITHOUT CYLINDER**

Solo version



XTRATILT L version with lugs – direct connection to the bucket



XTRATILT K version Adapter to dipperstick connection and quick coupler



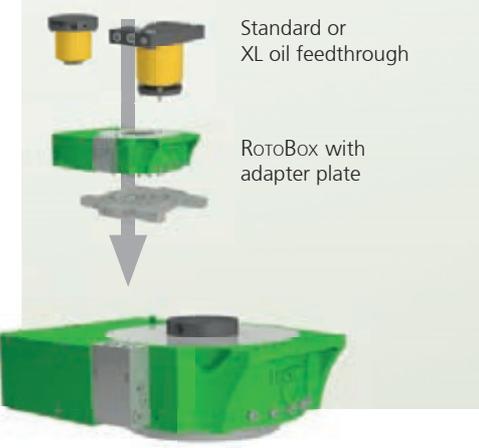
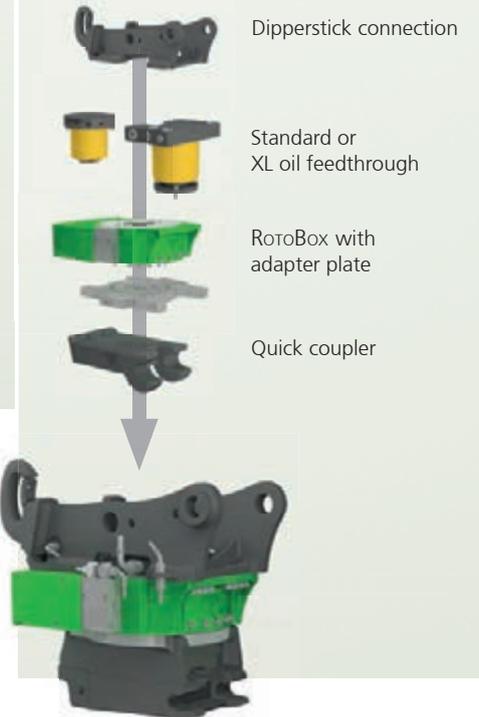
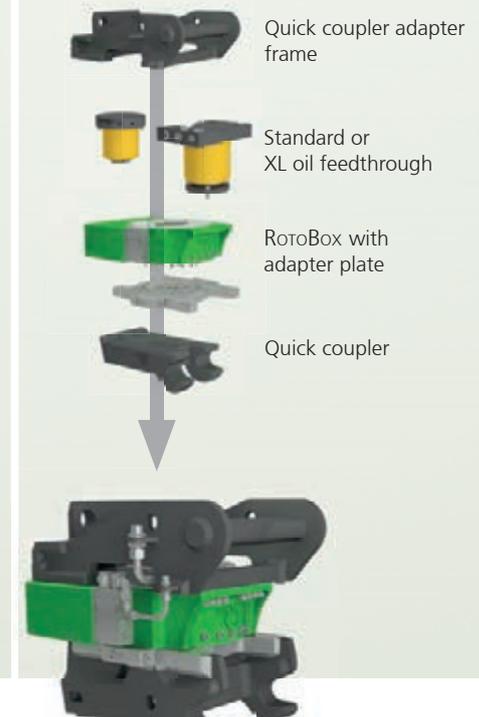
XTRATILT K version Quick coupler adapter frame above and quick coupler below



Sandwich solution

ROTOBox

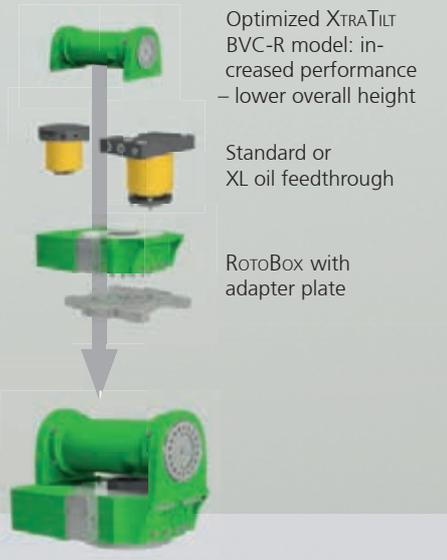
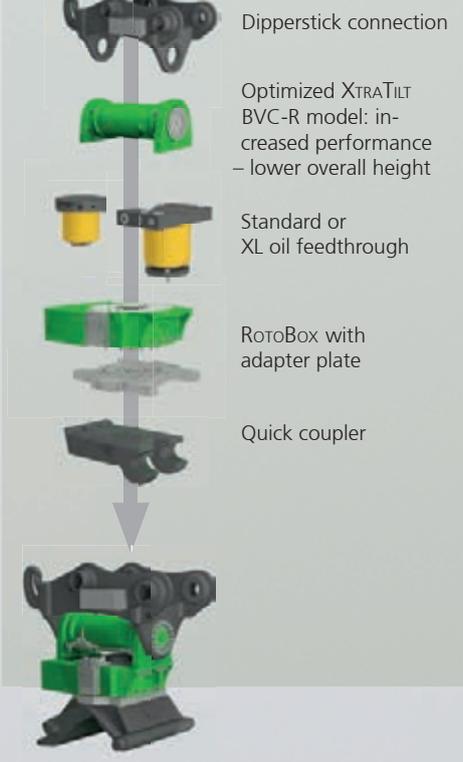
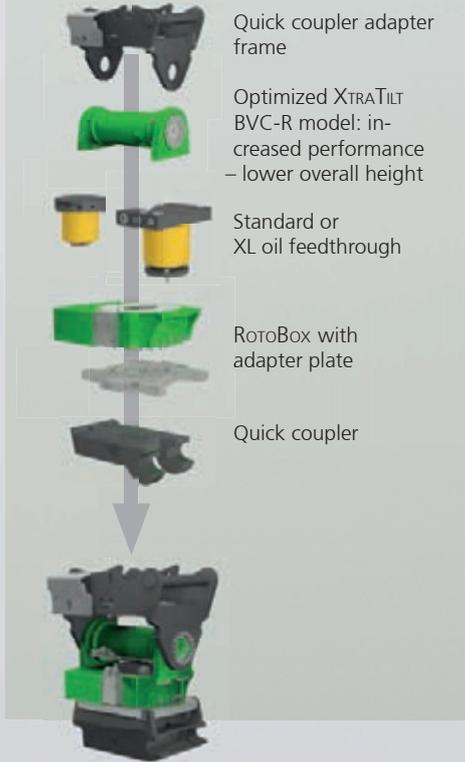
Sandwich solution

Solo version	ROTOBox K version Adapter to dipperstick connection and quick coupler	ROTOBox K version Quick coupler adapter frame above and quick coupler below
 <p>Standard or XL oil feedthrough</p> <p>RotoBox with adapter plate</p>	 <p>Dipperstick connection</p> <p>Standard or XL oil feedthrough</p> <p>RotoBox with adapter plate</p> <p>Quick coupler</p>	 <p>Quick coupler adapter frame</p> <p>Standard or XL oil feedthrough</p> <p>RotoBox with adapter plate</p> <p>Quick coupler</p>

TILTROTATOR

BETTER WITHOUT CYLINDER

Sandwich solution

Solo version	TILTROTATOR K version Adapter to dipperstick connection and quick coupler	TILTROTATOR K version Quick coupler adapter frame above and quick coupler below
 <p>Optimized XTRATILT BVC-R model: increased performance – lower overall height</p> <p>Standard or XL oil feedthrough</p> <p>RotoBox with adapter plate</p>	 <p>Dipperstick connection</p> <p>Optimized XTRATILT BVC-R model: increased performance – lower overall height</p> <p>Standard or XL oil feedthrough</p> <p>RotoBox with adapter plate</p> <p>Quick coupler</p>	 <p>Quick coupler adapter frame</p> <p>Optimized XTRATILT BVC-R model: increased performance – lower overall height</p> <p>Standard or XL oil feedthrough</p> <p>RotoBox with adapter plate</p> <p>Quick coupler</p>



TILTROTATOR **TR**  



ROTOBOX **RB** 



XTRATILT **XT**   



Combinations



Combination
With adapter to dipperstick connection and quick coupler



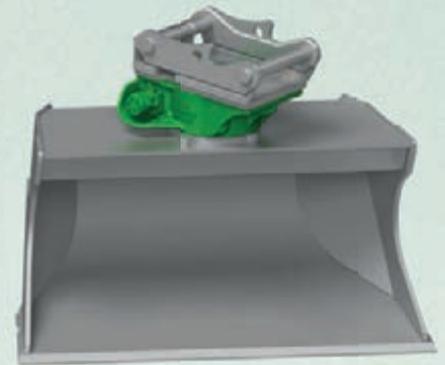
Sandwich solution
With quick coupler adapter and quick coupler



Combination
With adapter to dipperstick connection and quick coupler



Sandwich solution
With quick coupler adapter and quick coupler



Direct attachment
For connecting directly to the bucket



With lugs
With lugs for direct connection
With oil feedthrough as an option



Combination
With adapter to dipperstick connection and quick coupler



Sandwich solution
With quick coupler adapter and quick coupler



Direct attachment
For connecting directly to the bucket

Modular "TILTROTATOR"

Sandwich – the solution

The HKS sandwich solution enables a TILTROTATOR to be equipped with a quick coupler instead of a fixed adapter to dipperstick connection, for instance, which means that the excavator driver can use the TILTROTATOR like a standard attachment. The lower quick coupler is still responsible for the changeover of attachments.

FLEET MANAGEMENT. The HKS product can be used for your entire fleet.

ATTACHMENTS. Existing attachments can still be used without the need for conversion. At the same time, all conventional attachments can be combined with the HKS product for all carrier devices.

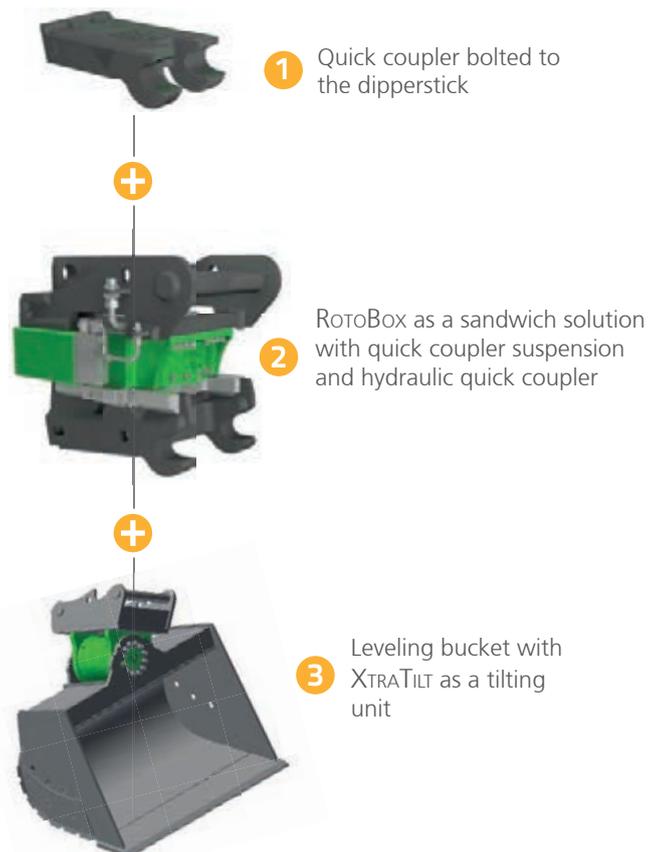
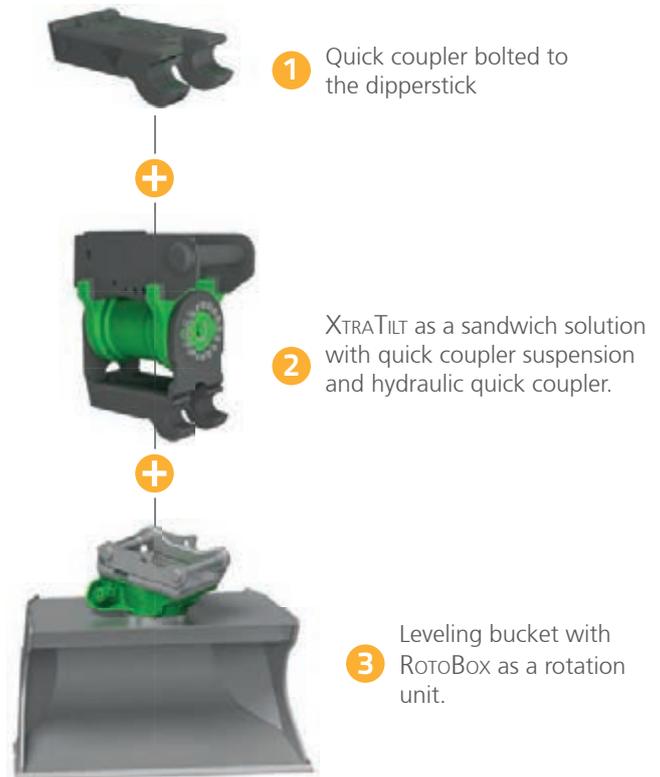
INDEPENDENCE. The carrier device can still be operated by untrained personnel with no TILTROTATOR/ROTOBOX/XTRATILT experience.

NO TEAR-OUT FORCE LOSSES. The HKS product can be removed if necessary, and the carrier device works at full power upon start-up.

WEIGHT REDUCTION. Should the lifting load be too high for the carrier device, the HKS product can be removed for this extreme application.

QUICK COUPLER. Both mechanical and fully hydraulic quick-coupler systems can be used and combined. At the same time, it is also possible to use two different systems.

Along with a ROTOBOX or XTRATILT in a sandwich design, you have combined a flexible, modular TiltRotator.



Sandwich solution – flexibly replaceable

Here are some examples of how the sandwich solution allows you to work flexibly. You can use the right tool for the work at hand, at any time. As a combination with or without HKS products.



1 Quick coupler bolted to the dipperstick



XTRATILT



ROTOBOX



TILTROTATOR



Leveling bucket



Grab



Backhoe bucket



Ripper tooth

TILTROTATOR



Further intermediate tilt angles available by request.

- › 2 x 55° simultaneous tilting and endless rotation
- › This solution for attachments allows them to be positioned and held in place in the machine's operating area
- › More efficient machine utilization rate and related cost reduction with the **TILTROTATOR**

The TILTROTATOR enables you to tilt your attachment $\pm 55^\circ$ (even higher by request) in both directions and rotate endlessly at the same time. These two functions provide three-dimensional positioning easily and accurately, increasing your efficiency and productivity.

With its compact and robust tilt unit, the TILTROTATOR is an incomparable alternative to conventional wider cylinder variants, which are prone to faults. An optimized XtraTilt with extended torque and reduced overall height is used for the TILTROTATOR.

Details

- ✓ Standard tilt angle of 2 x 55° (even higher by request)
- ✓ Holding torque of up to 90,000 Nm
- ✓ Torque of up to 43,000 Nm
- ✓ In 10 models for a carrier device weight of up to 55 t
- ✓ Up to 8 rotations per minute
- ✓ Modular system design



Meet the challenges of excavating to the side effortlessly and efficiently.

Get the maximum out of your machine – in any situation!



Lower
consumption –
greater
performance

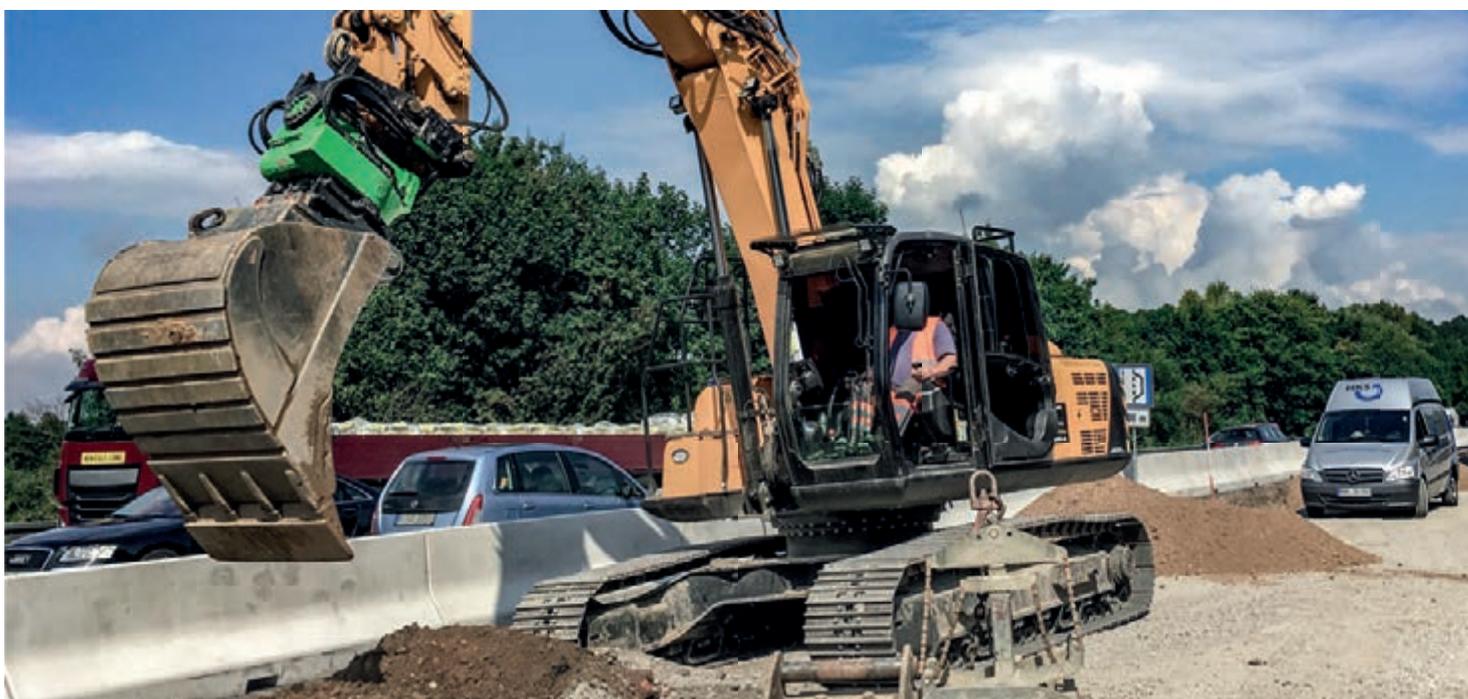


Photo: Erwin Bauer



Product advantages

More efficient machine utilization rate

- ✓ Optimized working width makes it possible to attach narrower and lighter implements, which reduces weight and makes excavation more precise
- ✓ Extended radius of action in a stationary position
- ✓ Larger tilt angle
- ✓ Quick coupler accommodates implements from any standing position of the carrier device
- ✓ Increases the mobility of your attachments, optimizes their range of operation

Indispensable for gardening and landscaping, drainage channel construction and civil engineering!

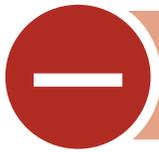
Reduces construction site costs

- ✓ Less readjustment of the vehicles saves time and fuel, reduces wear and tear to the machine
- ✓ Fewer maintenance requirements and less lubrication reduce downtimes
- ✓ Increased machine utilization rates of up to 40% shorten the amortization period
- ✓ Easy retrofitting of existing machinery thanks to compatibility with all quick couplers and carrier devices
- ✓ Maximum accessibility and precise maintenance of the selected operating positions
- ✓ More orders can be completed during the same amount of time



Increased machine
utilization rate
of up to
40%

The difference is crucial



Conventional models

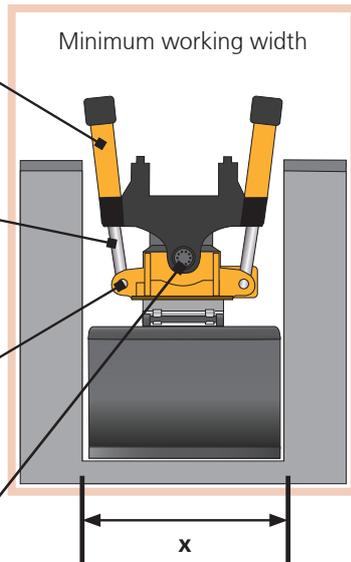
Protruding, obstructive cylinders. Problems with excavating

Damage to the cylinders caused by soil, stones and dirt

Continuous re-lubrication/greasing of the cylinder bearing necessary

Bearings susceptible to maintenance

Restricted tilt angle and angle-dependent tilt torque



HKS TILTROTATOR

BETTER WITHOUT CYLINDER



Minimum working width

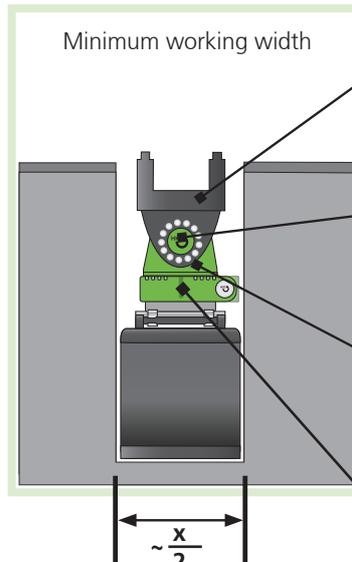
Narrower installation width, compact, robust, not sensitive to dirt, powerful

Greater accessibility thanks to greater tilt angle

Lower maintenance costs due to longer service intervals

Maintenance-free, strong friction bearings

Constant tilt torque, regardless of tilt angle

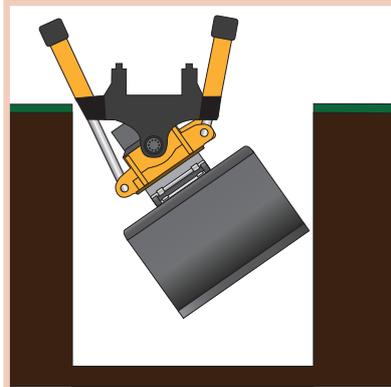


Simplified representation



Conventional models

During a tilting or pivoting movement, the excavator operator cannot see the protruding cylinder when the machine is lowered into the recess and cannot know if the cylinder is scraping up against the wall. The cylinder version is irritating!

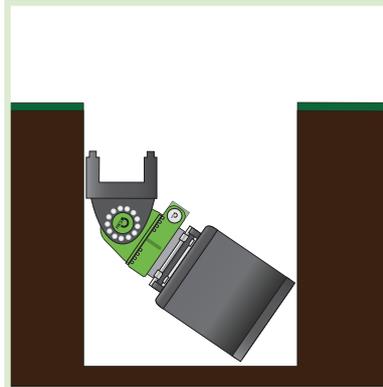


HKS TILTROTATOR

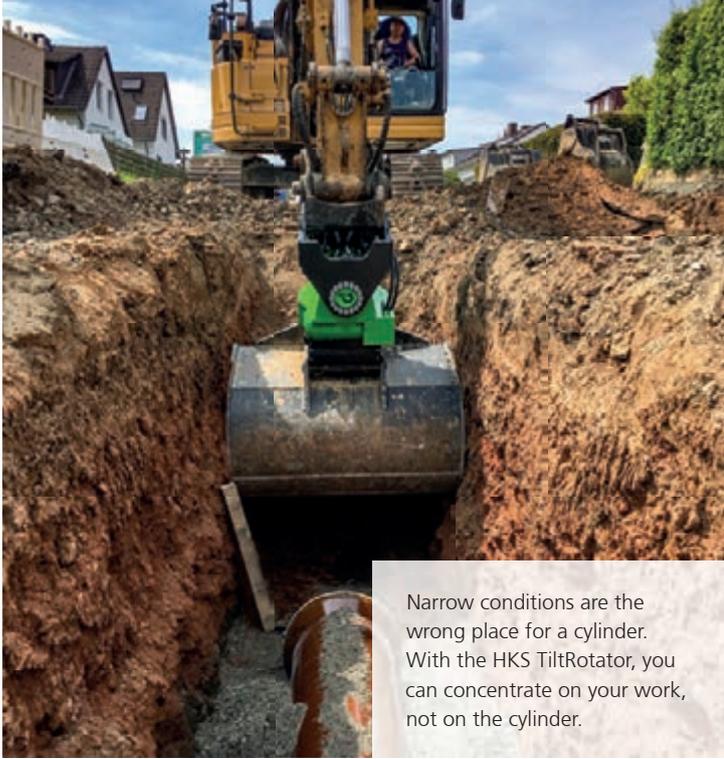
BETTER WITHOUT CYLINDER



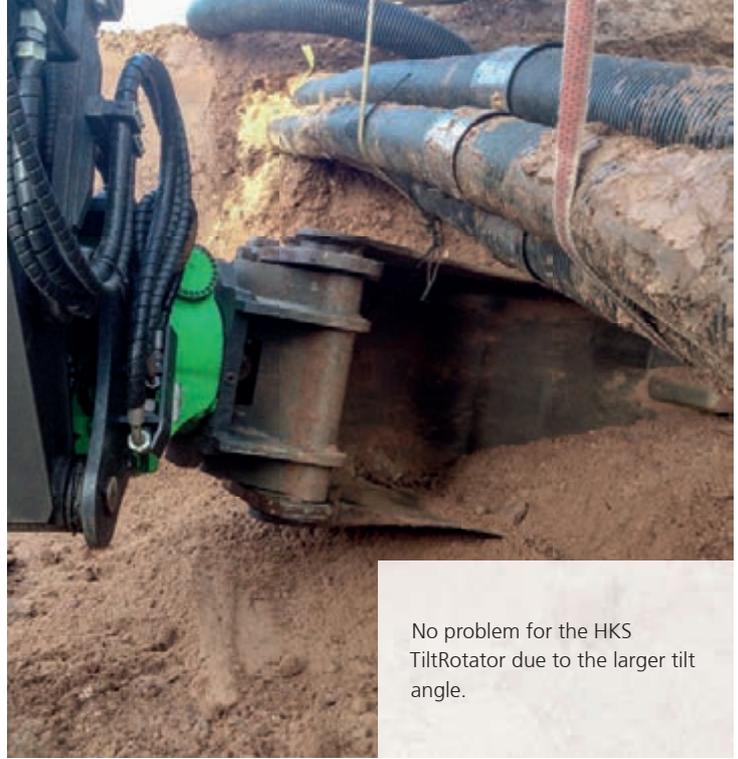
Without a cylinder there are no difficulties during a lowering operation. The excavator operator can concentrate fully on the work that needs to be done.



Simplified representation

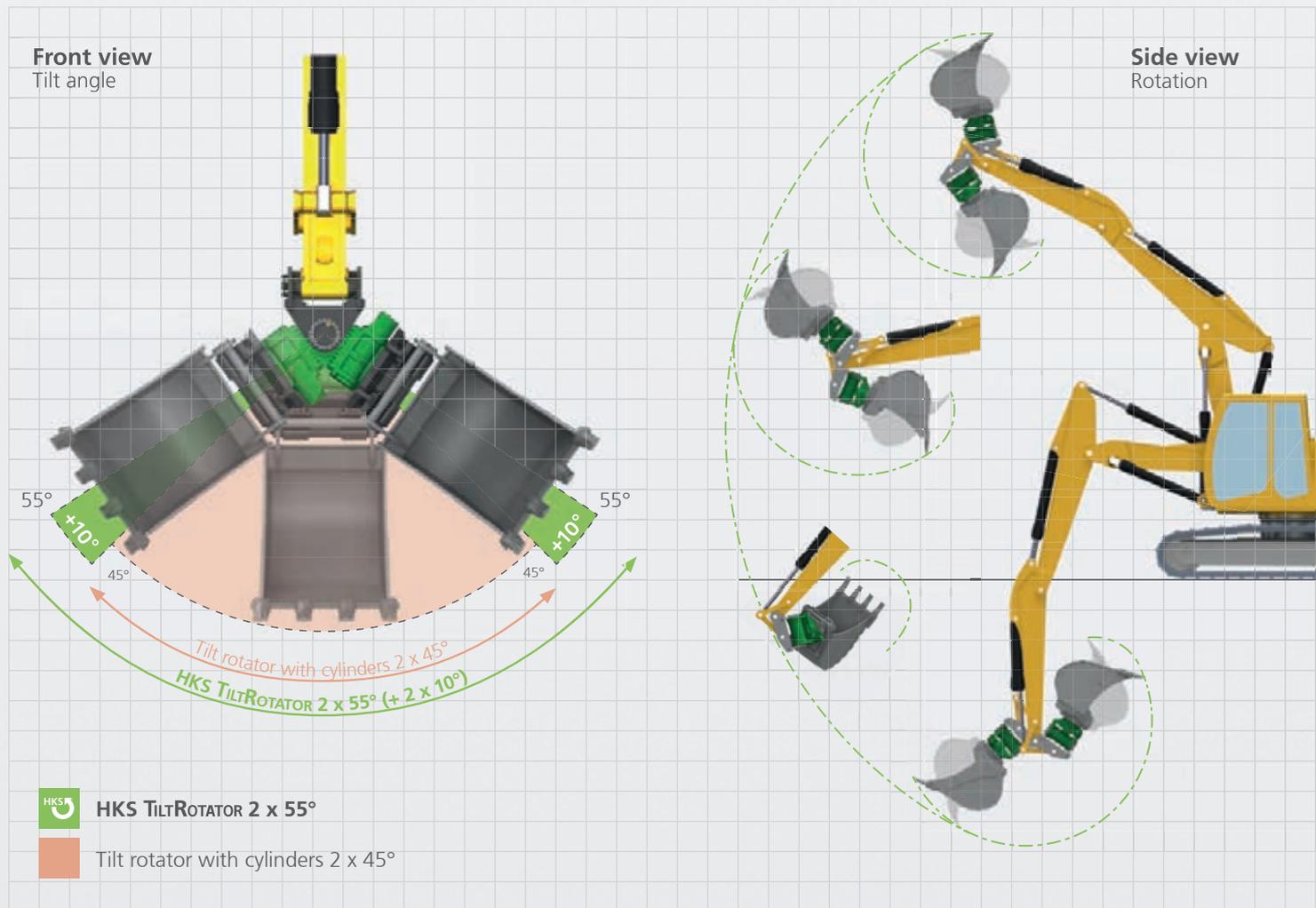


Narrow conditions are the wrong place for a cylinder. With the HKS TiltRotator, you can concentrate on your work, not on the cylinder.



No problem for the HKS TiltRotator due to the larger tilt angle.

Accessibility of operating positions



ROTOBOX



- › Continuous rotating in both directions
- › The **RotoBox** for positioning and holding attachments in place
- › Even more freedom of movement thanks to an extended radius of action
- › Use of narrower implements possible due to the new, narrower installation width

Extend your action radius to 360° with the RotoBox. This enables more flexible operation in a stationary position and additional fields of operation. Hydraulic tools requiring a large amount of oil can also be optimally used with the optional oil feedthrough. Together with our experts in sales you will find the RotoBox that meets the needs of your special applications.

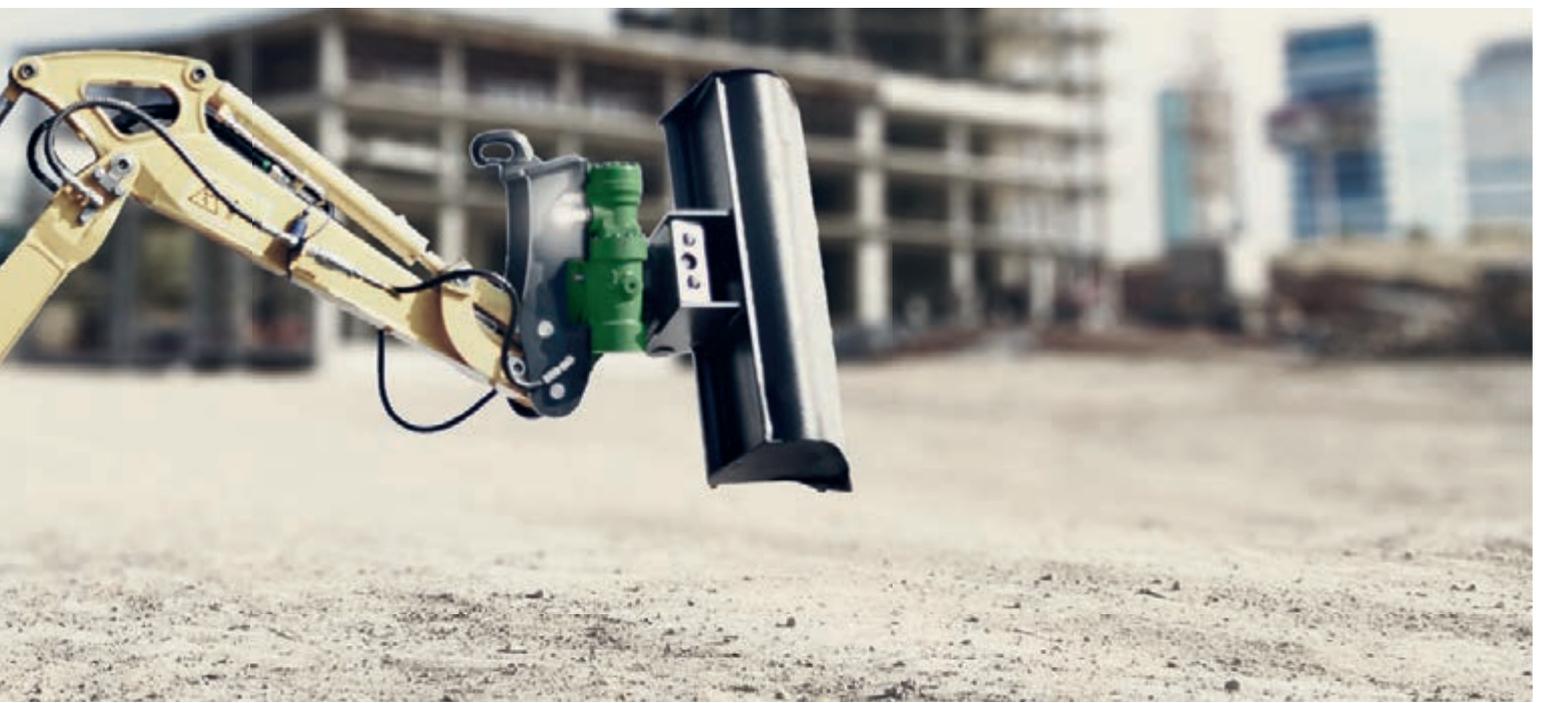
Details

- ✓ Torque of up to 12,000 Nm
- ✓ Up to 8 rotations per minute
- ✓ Operating pressure of up to 175 bar
- ✓ In 7 sizes for a carrier device weight of up to 55 t



For current application videos, see:

▶ www.hks-partner.com



Flexible and robust

The RotoBox

The current generation of the RotoBox is based on a completely new design. Here we significantly reduced overall height and weight and simultaneously maximized durability. The installation width was also optimized and now narrower and therefore lighter implements can be attached.

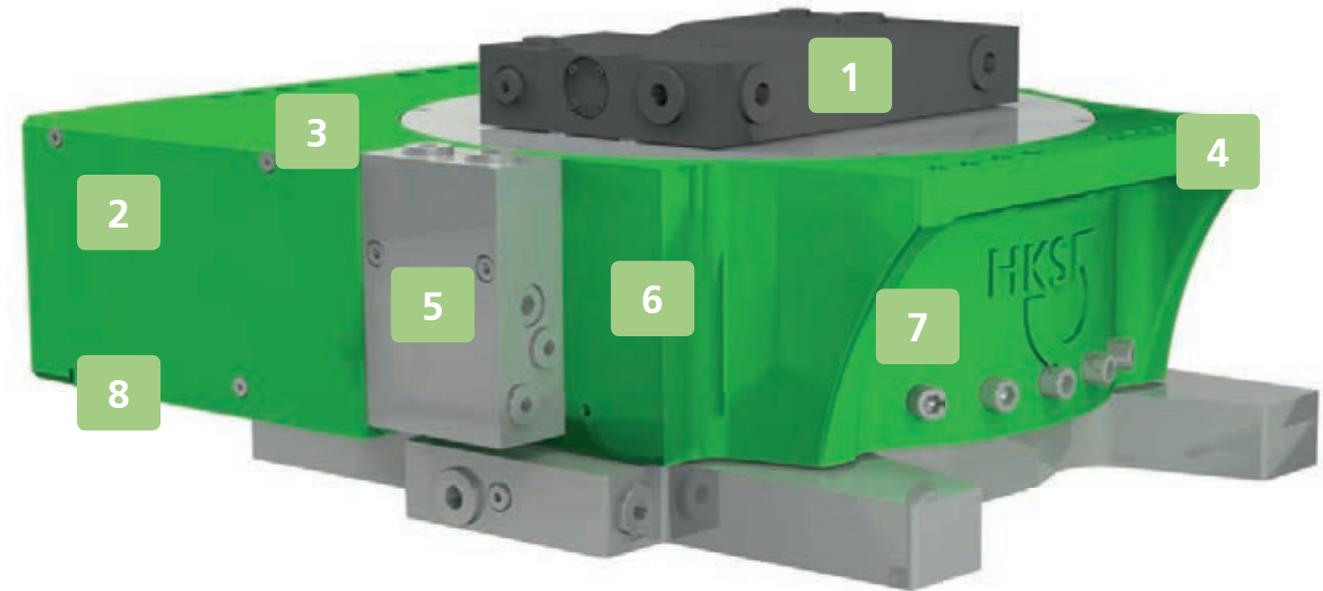
The two oil feedthroughs, with a flow rate of up to 500 l/min., ensure even greater flexibility. Depending on the individual case, you can select our standard design to save on weight and fuel or the large oil feedthrough for more powerful performance.

Product advantages

- ✓ **Precise operation:**
exact maintenance of the selected position, thanks to low-backlash gears and precise holding torques.
- ✓ **Great flexibility:**
compatible with all quick couplers and carrier devices and, due to the new installation width, narrower implements can be attached.
- ✓ **Faster operation:**
thanks to an endlessly rotating 360° action radius, your attachments achieve considerably more operating positions. For instance, by rotating the bucket a backhoe bucket can quickly be turned into a face bucket.
- ✓ **Long service life:**
thanks to high strength steel casting and a worm drive gear running in oil, downtimes are minimized, and a high utilization rate of your machine is guaranteed.
- ✓ **Cost savings:**
no additional rotator required for hydraulic tools.



Product advantages at a glance



1

The RotoBox can be equipped with one of two different oil feedthroughs – either to reduce weight (standard) or to achieve more powerful performance (XL). It is also available without oil feedthrough.

2

The hydraulic motor is integrated into the housing with perfect protection.

3

The housing is made of high strength cast steel. This reduces weight and ensures durability.

4

Instead of the blind hole threads in the housing, now there are through holes. This makes the assembly and disassembly of part-turn actuators and any other attachments much easier.

5

The RotoBox series is equipped with flow control and pressure relief valves so reducing the pressure on the excavator hydraulics is no longer necessary!

6

The modified bearing of the worm wheel has reduced the overall height. This also reduces weight.

7

A worm wheel made of a high strength bronze alloy provides even greater longevity and power.

8

With the RB 60 and the RB 120, the hydraulic motor is aligned in the axial direction, which reduces the width dimension and makes it possible to use even narrower, more cost-effective attachments.

Maximum power

500
l/min



THE HKS OIL FEEDTHROUGH

Details

- › Two sizes available (Standard + XL)
- › Five channels at a flow rate of up to 500 l/min.
- › Optional power feedthrough
- › Operating pressure of up to 350 bar

With the extra large HKS oil feedthrough, connected hydraulic tools are supplied with a flow rate of up to 500 l/min. oil (pressure difference $\Delta p=10$ bar (HLP 46 30 °C)*).

Only the HKS oil feedthrough can get the flow rate supplied by your carrier device to your attachment at the lowest pressure difference. This feature enables your tools to operate at full capacity.

Don't make compromises – put your trust in HKS products!

The unique design and special manufacturing process allow for particularly large channels for greater passage and a low efficiency loss rate. The individual flow rates can be flexibly distributed using multiple connectors. The piping can therefore be optimally adjusted and implemented to suit your carrier device.

Available with five lubricant channels (two for quick couplers, two for the implement, one for the leakage oil line) and a power feedthrough.

Special solutions with three, six or seven channels or more by request!

Product advantages

- ✓ Maximum capacity for your hydraulic attachments
- ✓ Wear-resistant, high-quality components
- ✓ Your attachment has an operating pressure of up to 350 bar
- ✓ Up to 500 l/min. flow rate and extremely low pressure differential
- ✓ Optimum adjustment to any quick coupler
- ✓ Electric feedthrough with up to 12 connections of two amperes each
- ✓ Available options for excavator classes of 1–27 t: standard version or extra large (XL) oil feedthrough

Check with our sales department with regard to the hydraulic attachments to be used (milling machines, hammers, or similar equipment).



Standard oil feedthrough

- ✓ Weight reduction
- ✓ Extremely effective flow rate of up to 52 l/min. and low weight
- ✓ Compatible with the new RotoBox
- ✓ Available even for mini-excavators starting at 1 t
- ✓ Minimal back pressure even with viscous hydraulic oil HLP 46 at 30 °C
- ✓ Power feedthrough option (4 + 1 channels)

Oil feedthrough for RotoBox	RB 30	RB 60	RB 120	RB 200	RB 270
Excavator class (t)	1–3,5	3–6	5–12	11–20	19–27
Weight [kg]	7.5	13	10.5	10.5	10.5
Flow rate of oil feedthrough system at pressure difference $\Delta p=10$ bar (HLP 46 30 °C)*	42 [l/min.]	52 [l/min.]	52 [l/min.]	52 [l/min.]	52 [l/min.]



Large oil feedthrough (XL)

- ✓ Compatible with the new RotoBox
- ✓ Incredible flow rate for work that requires power
- ✓ Available for excavators starting with the 5 t class
- ✓ Minimal back pressure even with viscous hydraulic oil HLP 46 at 30 °C
- ✓ Standard series version comes ready for power feedthrough (5 + 1 channels)

Oil feedthrough for RotoBox	RB 120	RB 200	RB 270	RB 380	RB 550
Excavator class (t)	5–12	11–20	19–27	26–33	32–55
Weight [kg]	22.9	35.5	57.2	By request	245
Flow rate of oil feedthrough system at pressure difference $\Delta p=10$ bar (HLP 46 30 °C)*	130 [l/min.]	160 [l/min.]	200 [l/min.]	By request	500 [l/min.]

*) The pressure losses indicated were ascertained in the flow of the rotary feedthrough in one direction. Pressure losses caused by attachments such as screw connections or hoses have not been taken into account. All weights exclude the adapter flange, cover, or screw package.

XTRATILT



- › Tilt up to 2 x 90°
- › The **XTRATILT** for positioning and holding attachments in place
- › An additional movement axis for greater versatility and flexibility

Many years of experience and innovation have made the XTRATILT even more robust, reliable and durable. Thanks to the special deflectors on both sides, dirt is prevented from entering the housing of the XTRATILT range, making it maintenance-free from the day it leaves the factory. This feature considerably reduces maintenance costs. Together with our experts in sales you will find the XtraTilt that meets the needs of your special applications.

Details

- ✓ Standard rotating angles: 100°/140°/180°
- ✓ Holding torque of up to 165,000 Nm
- ✓ Operating pressure of up to 250 bar
- ✓ 49 models for 18 sizes for a carrier device weight of up to 100 t
- ✓ Further tilting weights available by request



Product advantages

- ✓ **Maintenance-free operation:**
no need for re-lubrication and readjustment.
- ✓ **Unlimited flexibility:**
compatible with all quick couplers and carrier devices.
- ✓ **Less material excavation:**
narrower attachment tools can be used, considerably reducing the working width.
- ✓ **More precise operation:**
high holding torques and precise manufacture ensure the exact maintenance of the selected position.
- ✓ **Constant torque/holding torque:**
regardless of the operating angle.
- ✓ **Durability:**
protection against wear, tear and rust thanks to special manufacturing, annealing and hardening processes which give the robust welded housings the utmost accuracy of shape.






100°



140°



180°

BVC 1–11 t

- ✓ Long-term quality in the use of tilt buckets for excavator classes up to 11 t.
- ✓ Available tilt angles of 100°, 140° and 180°



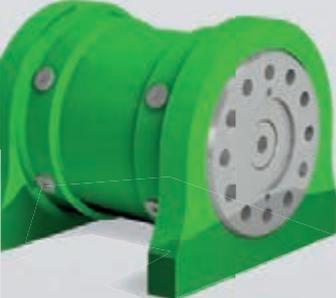



180°

BVD 1–16 t

Compared to the BVC at the same output:

- ✓ Lower space requirement
- ✓ Ideal fit for all commercially available quick couplers
- ✓ Regardless of the excavator hydraulics, thanks to directly connected load-holding valve
- ✓ Only available with a tilt angle of 180°





100°



140°



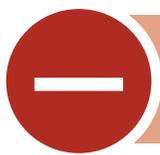
180°

BVE 10–100 t

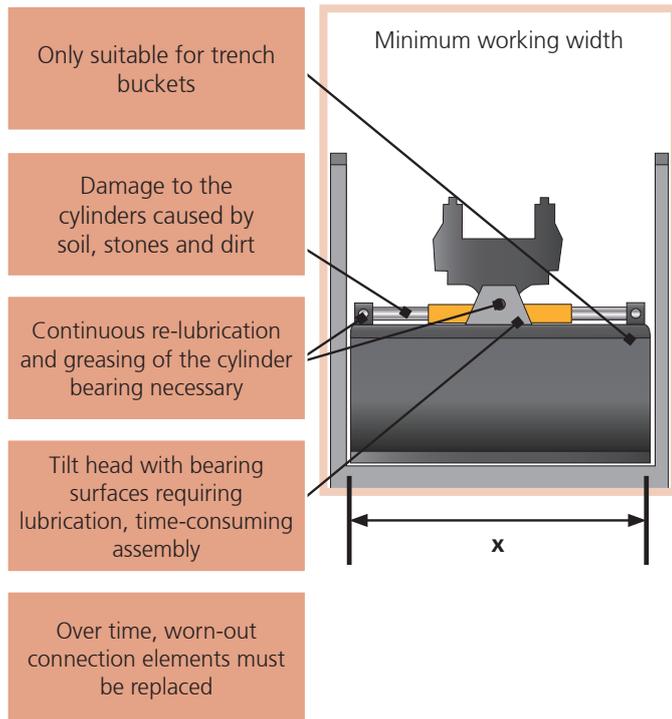
- ✓ Operating pressure of up to 250 bar
- ✓ Designed for biologically degradable media (dual seals)
- ✓ Reinforced shaft

For current application videos, see:
 www.hks-partner.com

The differences are in the details



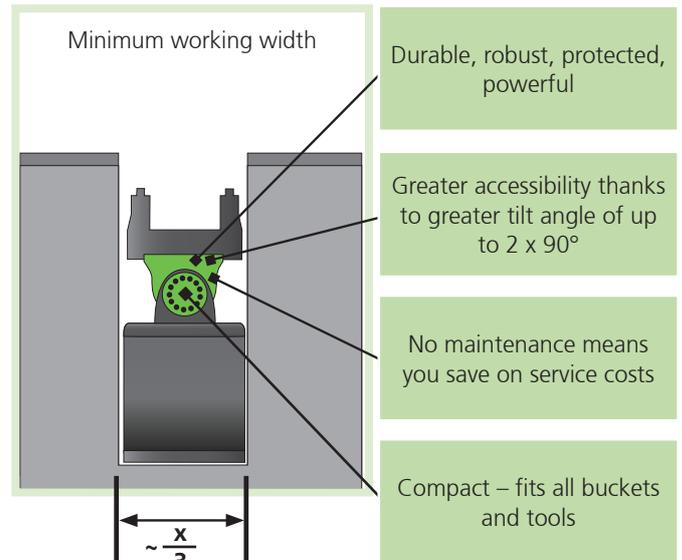
Bucket with linear cylinder



Simplified representation

HKS XTRATILT

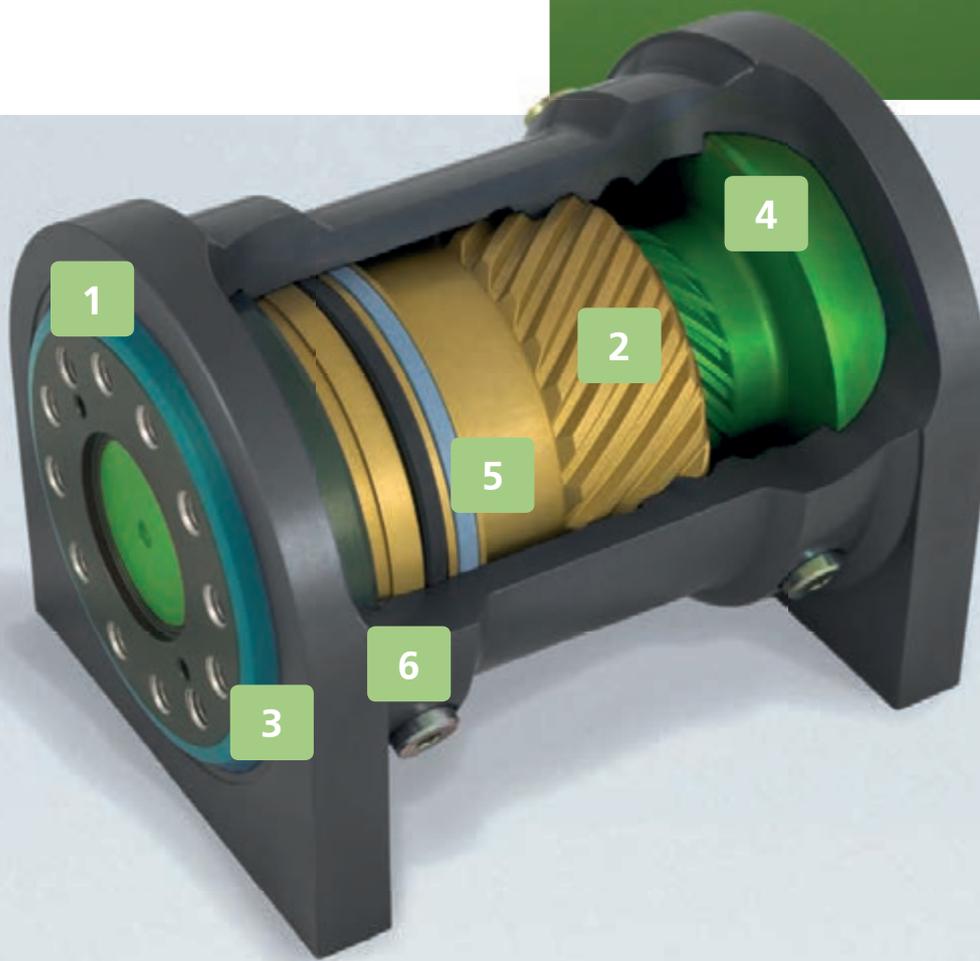
BETTER WITHOUT CYLINDER



The right choice for harsh everyday conditions

The compact **four-part construction** made from high-quality materials and its high-precision manufacturing make the XTRATILT the most robust rotary actuator in its class.

Just what you need for continuous operation



Product advantages at a glance

- | | | | |
|----------|---|----------|--|
| 1 | End flange with friction bearings, fastening thread and special deflector on both sides | 4 | Shaft with mounting flange and friction bearings all in one |
| 2 | Ultimate precision manufacture of paired interleaving | 5 | Surface-hardened piston with guiding element |
| 3 | Actuator centering on both sides for optimum power distribution | 6 | Surface-hardened and corrosion-resistant housing with screw or weld-type fastening on the feet |

Our service

Contact information:

- ▶ service@hks-partner.com
- ▶ Phone: +49-6053-6163-619

On site, fast

You can always be sure that you will get a high quality HKS product. Likewise, our goal is to succeed in providing the range of functions for daily use.

If you need on-site support once in a while, our service team is glad to provide quick and personal assistance. We offer this service everywhere in Germany.

Because each product is designed and manufactured especially for you, we know exactly which parts were installed. For this reason, if you need details regarding one of our products, we can help you and replace parts quickly.

Our sales and service teams are glad to consult with you on-site as well.

You can take advantage of these maintenance services during the winter months, for example. We offer complete maintenance and wear part replacement at our location so that nothing gets in your way during your everyday work.

It is very important to us that you are satisfied with our products.

Get to know our expert team!



State-of-the-art German mechanical engineering

As the cornerstone for today's HKS Dreh-Antriebe GmbH is laid, we are breaking new ground on the mechanical engineering market. Since 1970, in the area of hydraulic, pneumatic, and mechanical components and systems, there has been just one name that you can trust without question: HKS is your specialist when it comes to unsurpassed quality, safety, and performance.

The founders' focus has remained unchanged: finding a customer-specific solution for rotating and tilting masses. For 50 years, HKS Dreh-Antriebe GmbH has been developing, designing, producing, and selling hydraulic and compact pneumatic drives for rotating and tilting masses that are accelerated, braked, precisely positioned and held for customers in a wide variety of industrial sectors.

We develop robust drives especially for contractors and manufacturers of construction equipment and attachments that are suitable for use in harshest application conditions.

Every rotary actuator is developed, produced, and assembled in our facility. With our highly advanced CNC machines as well as conventional machines, a blank is made into a high quality, durable rotary actuator. Our manufacturing is done entirely in-house. We purchase only a few individual components such as sealing rings from external partners.

We are convinced that the quality of our rotary actuators, which is acknowledged worldwide, can only be produced if we manufacture and assemble in-house.

In a visit to our production facilities, you can see for yourself that Made in Germany quality is what we actually produce every day. We would be happy to explain our development process, all the way from design to after-sales service.



Location 2
Wächtersbach-Aufenu
"In den Pflanzenländern"



Many years of experience – satisfied customers



HPM GmbH – Goslar

Mr. Winter, a machinist at HPM According to Straßen- und Tiefbau GmbH, “The clear advantage is that HKS products without cylinders make our work a great deal easier. We installed a TR-K 60 and the reason we did it was not only its great flexibility, but also because the TiltRotator makes maintenance-free work possible.”



Immo Herbst GmbH – Frankfurt am Main

Till Kuhlig on the newly installed TiltRotator: “Not only was the service fantastic and the installation simple and uncomplicated, but the TiltRotator makes it possible to work in narrow, otherwise inaccessible places, which was a crucial point for us. In gardening and landscaping work, it’s important that the machine doesn’t have to move too much, on lawns, for example, so that plantings are not damaged, which is simply quite possible when you use the TiltRotator.”

Technical data

TILTROTATOR



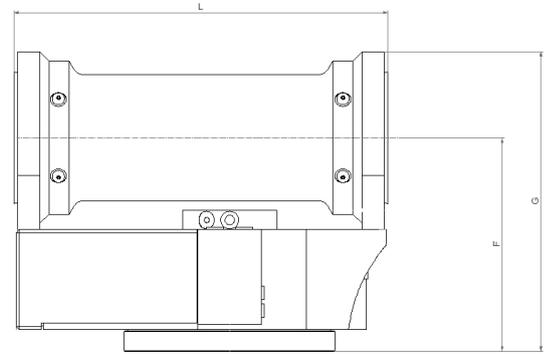
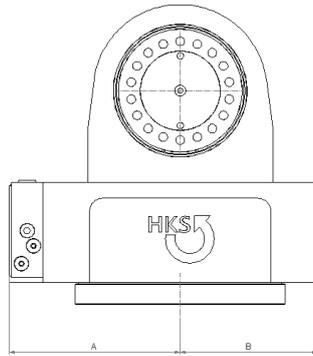
TILTROTATOR	TR 20		TR 35		TR 60		TR 90			TR 120		
Excavator class (t)	2.0–2.5		2.4–3.5		3–6		5.5–9			8–12		
Oil feedthrough model	-	Standard	-	Standard	-	Standard	-	Standard	XL	-	Standard	XL
Flow rate of oil feedthrough system at pressure difference $\Delta p=10$ bar (HLP 46 30 °C)* [l/min]	-	42	-	42	-	52	-	52	130	-	52	130
Designated RoroBox	RB 30		RB 30		RB 60		RB 120			RB 120		
Weight of RoroBox excluding rotary feedthrough [kg]	40 and up		40 and up		78 and up		110 and up			110 and up		
Permitted axial load max. [N]	95,000		95,000		100,000		160,000			160,000		
Permitted radial load max. [N]	48,000		48,000		95,000		140,000			140,000		
Torque @ 175 bar [Nm]	810		810		1,350		3,500			3,500		
r/min. @ l/min. at max. 175 bar	8 @ 28 l/min.		8 @ 28 l/min.		8 @ 28 l/min.		8 @ 45 l/min.			8 @ 45 l/min.		
Recom. max. bucket width [mm]	1,100		1,200		1,400		1,500			1,600		

Designated BVC-R	BVC-R 90		BVC-R 100		BVC-R 110		BVC-R 130			BVC-R 140		
Tilt angle	110°		110°		110°		110°			110°		
Amount of oil required per 6 sec. tilt time	3 l/min.		5 l/min.		7 l/min.		15 l/min.			21 l/min.		
Displacement [dm³]	0.288		0.413		0.63		1.44			2.03		
Torque @ 210 bar [Nm]	1,700		2,600		3,500		8,500			10,000		
Holding torque @ 210 bar [Nm]	5,000		7,500		11,000		20,000			22,000		
Weight [kg]	27		35		58		80			99		

Dimensions	A [mm]		B [mm]		F [mm]		G [mm]		L [mm]		Total weight of TR excluding rotary oil feedthrough [kg]	
A [mm]	176		176		200		251		251		280 and up	
B [mm]	112		112		145		180		180		240 and up	
F [mm]	193	223	198	228	222	254	264	294	307	266	296	309
G [mm]	263	293	273	303	307	339	378	401	414	378	408	421
L [mm]	301		353		484		480			540		
Total weight of TR excluding rotary oil feedthrough [kg]	67 and up	89 and up	75 and up	97 and up	135 and up	171 and up	190 and up	221 and up	262 and up	209 and up	240 and up	280 and up

Deliveries and services based solely on our Terms and Conditions.

Exact values for your specific actuator can be found in the respective technical drawings or operating instructions.



TR 150			TR 200			TR 270			TR 380	TR 550
11–15			14–20			19–27			24–33	32–55
-	Standard	XL	-	Standard	XL	-	Standard	XL		
-	52	160	-	52	160	-	52	200	By request	500
RB 200			RB 200			RB 270			RB 380	RB 550
159 and up			159 and up			260 and up			By request	By request
210,000			210,000			400,000				
180,000			180,000			250,000				
4,700			4,700			8,000				
6 @ 45 l/min.			6 @ 45 l/min.			6 @ 55 l/min.				
1,700			2,000			By request				
BVC-R 140 (more powerful version)			BVC-R 160			BVC-R 200			By request	By request
110°			110°			110°				
21 l/min.			26 l/min.			44 l/min.				
2.08			2.53			4.32				
10,500			15,000			21,000				
28,000			38,000			52,000				
122			145			204				
268			268			292			By request	By request
215			215			280				
296	328	340	305	337	349	333	335	391		
415	447	459	441	473	485	476	478	534		
585			585			726				
281 and up	319 and up	390 and up	304 and up	342 and up	410 and up	464 and up	518 and up	654 and up		

*) The pressure losses indicated were ascertained in the flow of the rotary feedthrough in one direction. Pressure losses caused by attachments such as screw connections or hoses have not been taken into account.

All weights exclude the quick coupler, adapter to dipperstick connection, adapter flange, cover, or screw package.

Technical data

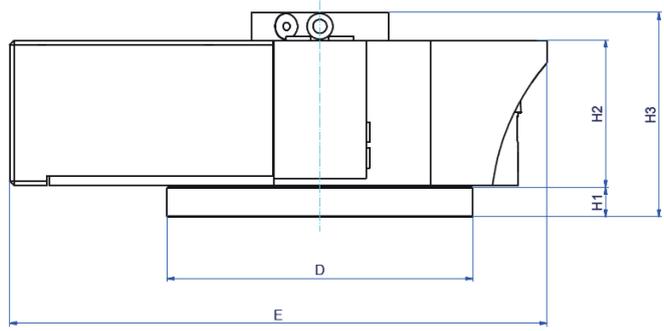
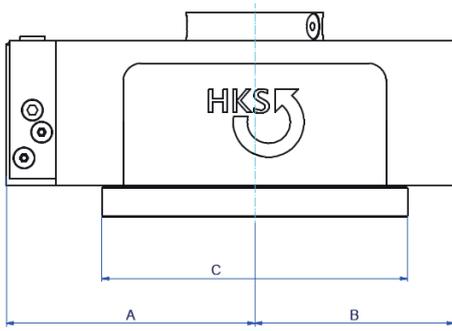
ROTOBox



RotoBox	RB 30		RB 60		RB 120		
Excavator class (t)	1–3,5		3–6		5–12		
Oil feedthrough model	-	Standard	-	Standard	-	Standard	XL
Flow rate of oil feedthrough system at pressure difference $\Delta p=10$ bar (HLP 46 30 °C)*	-	42 [l/min.]	-	52 [l/min.]	-	52 [l/min.]	130 [l/min.]
Weight of ROTOBox excluding rotary feedthrough [kg]	40 and up		78 and up		110 and up		
Permitted axial load max. [N]	95,000		100,000		160,000		
Permitted radial load max. [N]	48,000		95,000		140,000		
Torque @ 175 bar [Nm]	810		1,350		3,500		
r/min. @ l/min. at max. 175 bar	8 @ 28 l/min.		8 @ 28 l/min.		8 @ 45 l/min.		
Recommended max. bucket width [mm]	1,200		1,400		1,700		
Dimensions							
A [mm]	176		200		251		
B [mm]	112		145		180		
C [mm]	255		290		265	400	
D [mm]	290		275		265	360	
E [mm]	425		481		530		
H1 [mm]	30		32		30	43	
H2 [mm]	106		129		151		
H3 [mm]	146	172	188	198	201	206	231

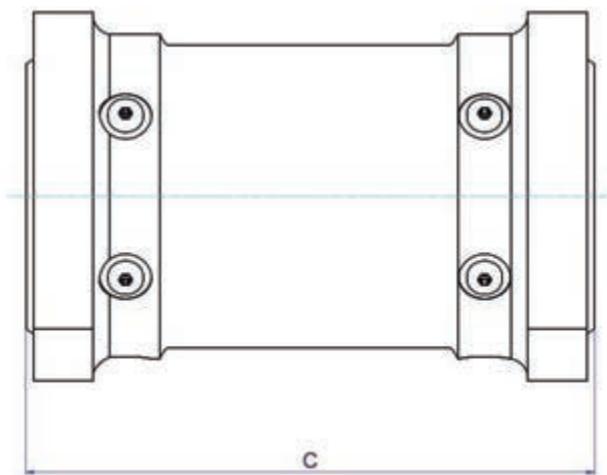
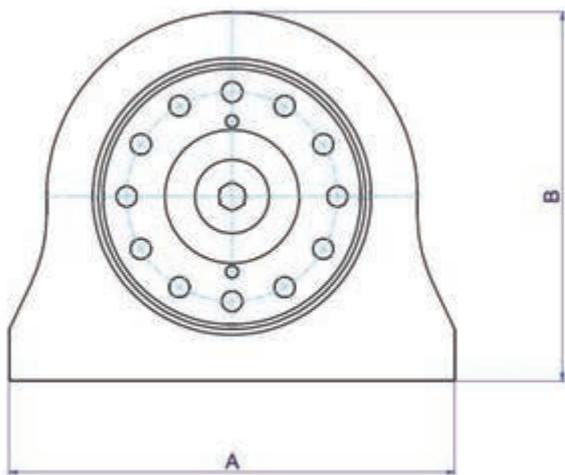
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Exact values for your specific actuator can be found in the respective technical drawings or operating instructions.



RB 200			RB 270			RB 380	RB 550
11-20			19-27			26-33	32-55
-	Standard	XL	-	Standard	XL	By request	
-	52 [l/min.]	160 [l/min.]	-	52 [l/min.]	200 [l/min.]	By request	500 [l/min.]
159 and up			260 and up			500 and up	~800
210,000			400,000			520,000	850,000
180,000			250,000			310,000	500,000
4,700			8,000			12,500	12,000
6 @ 45 l/min.			6 @ 55 l/min.			6 @ 80 l/min.	5 @ 82 l/min.
1,800			2,000			By request	2,600
268			292			375	355
215			280			375	300
330			380			600	880
330			380			500	600
580			721			-	320
32			2			-	400
165			185			260	400
197	222	251	187	212	290	-	-

*) The pressure losses indicated were ascertained in the flow of the rotary feedthrough in one direction. Pressure losses caused by attachments such as screw connections or hoses have not been taken into account. All weights exclude the quick coupler, adapter to dipperstick connection, adapter flange, cover, or screw package.



XTRATILT Size	240			250			260			270			290			300			350			400*			420*			450*																										
Excavator class (t)	11-16			15-23			22-26			25-29			28-34			28-38			37-50			48-60			58-70			68-100																										
XTRATILT BV series	E			D			E			E			E			E			E			E			E			E																										
Holding torque [Nm]	34,000			34,000			40,000			43,000			54,000			80,000			By request			By request			90,000			100,000			140,000			165,000																				
Working pressure [bar]	250			210			250			250			250			250			By request			By request			250			250			250																							
Tilt angle	100°			140°			180°			178°			100°			140°			180°			100°			140°			180°			100°			140°																				
Displacement [dm³]	1.851			2.591			3.331			3.78			1.777			2.486			3.197			3.29			3.519			4.525			3.765			4.115			5.29			4.239														
Weight [kg]	182			186			206			191			202			236			264			269			301			344			334			374			414			365														
A [mm]	390			380			412			450			492			490			By request			By request			570			By request			608			760			800																	
B [mm]	328			328			353			380			400			400			478			515			620			680			540			612			565			641			675			800			707			835		

By request

Further sizes and tilt angles available by request ▶ vertrieb@hks-partner.com

All weights exclude quick coupler and adapter to dipperstick connection.

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TILTROTATOR • ROTOBOX • XTRATILT



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