

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 $2 \times 55^\circ$ (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

The HKS TiltRotator enables precise handling on track construction sites, ideal for two-way excavators. With the HKS TiltRotator, you increase the radius of action and minimize the need to move the machine.



FACTS

- $2 \times 55^\circ$ 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**

LOWER CONSUMPTION – GREATER PERFORMANCE



**INDISPENSABLE
FOR GARDENING
AND LANDSCAPING.
DRAINAGE CHAN-
NEL CONSTRUCTION
AND CIVIL
ENGINEERING!**

YOUR ADVANTAGES

1 | 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

2 | REDUCES CONSTRUCTION SITE COSTS:

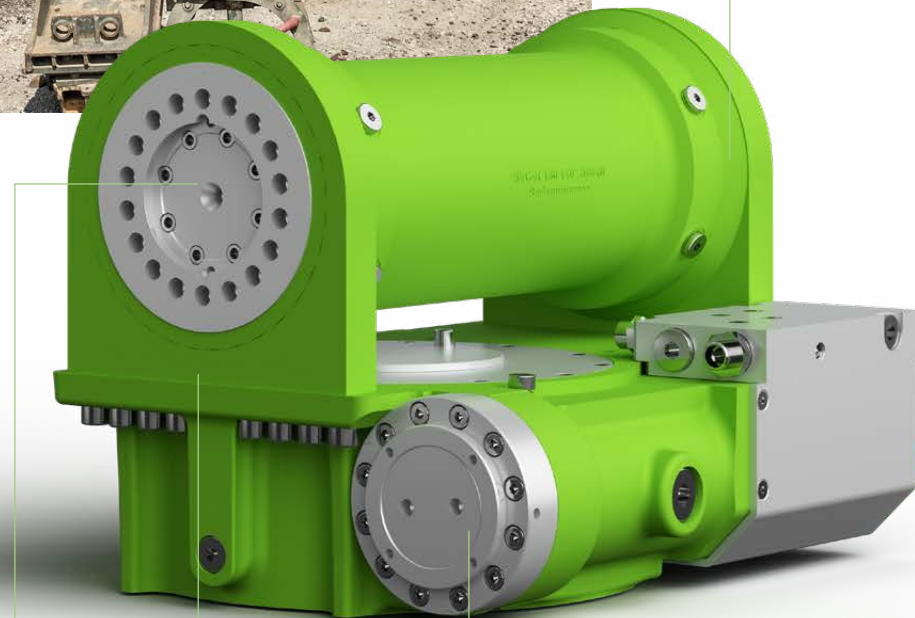
- Less readjustment of the vehicles saves time and fuel, reduces wear and tear to the machine
- Fewer maintenance requirements and less lubrication reduce downtimes
- Increased machine utilization rates of up to 40% shorten the amortization period
- Easy retrofitting of existing machinery thanks to compatibility 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%

Protected and robust
housing.



Optional interface for HKS
XtraSense (load sensor)

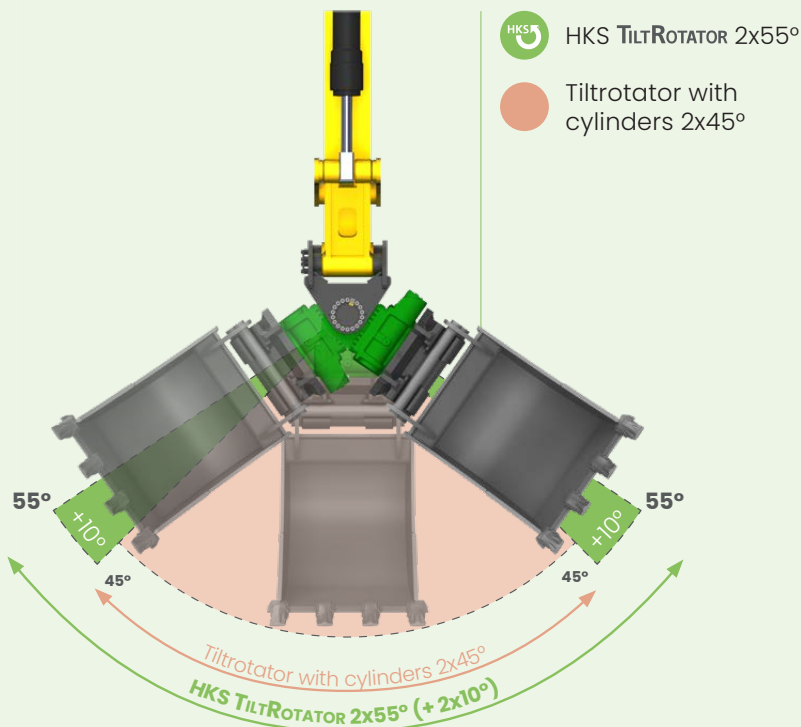
XtraTilt instead of cylinders, main-
tenance-free and extremely durable.

Optional interface for 3D/GPS and 2D
systems (HKS sensor) and HKS XtraSense
(load sensor)

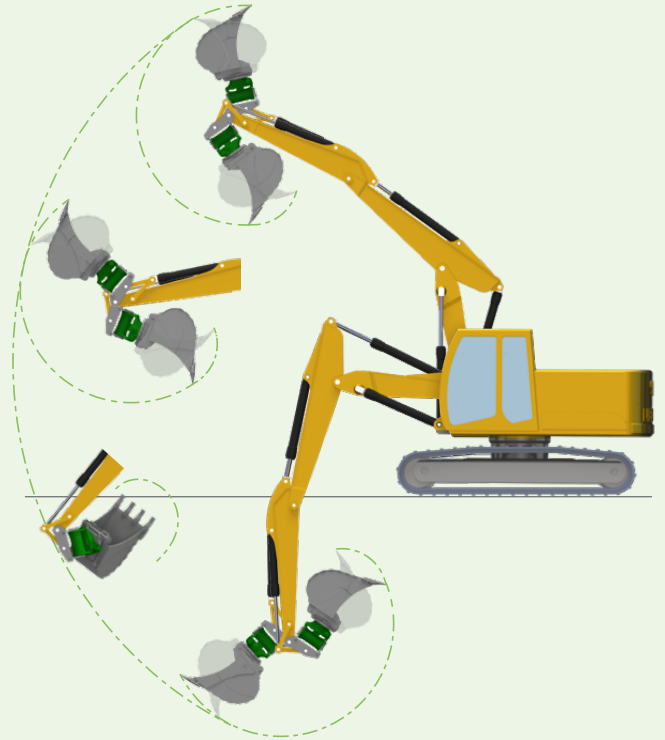
THE DIFFERENCE IS CRUCIAL

ACCESSIBILITY OF OPERATING POSITIONS

FRONT VIEW TILT ANGLE



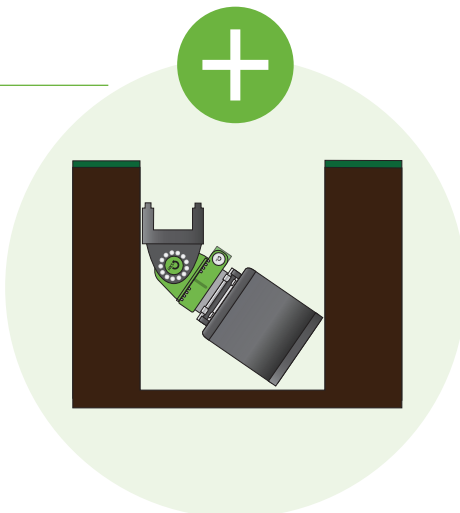
SIDE VIEW ROTATION



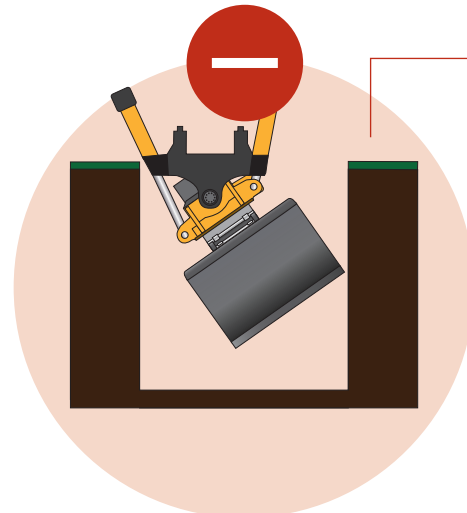
HKS TILTROTATOR

BESSER OHNE
ZYLINDER

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.



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



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

MINIMUM WORKING WIDTH
 $\sim \frac{x}{2}$

CONVENTIONAL MODELS

Protruding, obstructive cylinders. Problems with excavating

Damage to the cylinders caused by soil, stones and dirt

Bearings susceptible to maintenance

Continuous re-lubrication/ greasing of the cylinder bearing necessary

Restricted tilt angle and angle-dependent tilt torque

MINIMUM WORKING WIDTH
 x

TECHNICAL DATA TILTROTATOR



TiltRotator	TR 20		TR 35		TR 60		TR 90			TR 120		
Excavator (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 $\Delta p=10\text{bar}$ (HLP 46 30°C)* [l/min]	-	42	-	42	-	52	-	52	130	-	52	130
Designated RotoBox	RB 30		RB 30		RB 60		RB 90			RB 120		
Weight of RotoBox excluding rotary feedthrough [kg]	40 and up		40 and up		78 and up		93 and up			110 and up		
Permitted axial load max. [N]	95.000		95.000		100.000		130.000			160.000		
Permitted radial load max. [N]	48.000		48.000		95.000		110.000			140.000		
Torque @ 175 bar [Nm]	810		810		1.350		3.000			3.500		
r/min. @ l/min. at max. 175 bar	8 @ 28 l/min.		8 @ 28 l/min.		8 @ 28 l/min.		8 @ 33 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.		13 l/min.			21 l/min.		
Displacement [dm³]	0.288		0.413		0.63		1.3			2.03		
Torque @ 210 bar [Nm]	1.700		2.600		3.500		7.400			10.000		
Holding torque @ 210 bar [Nm]	5.000		7.500		11.000		17.500			22.000		
Weight [kg]	27		35		58		75			99		

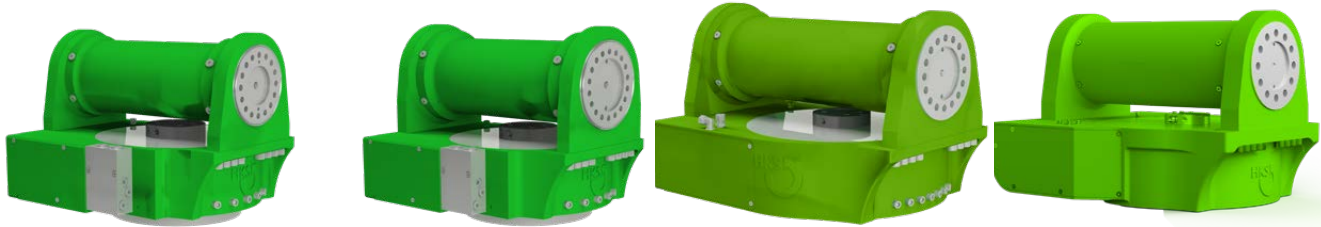
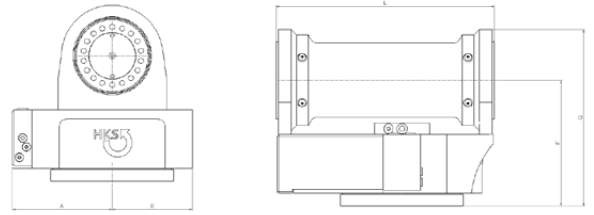
Dimensions

A [mm]	176		176		200		223			251		
B [mm]	112		112		145		159			180		
F [mm]	193	223	198	228	222	254	249	279	292	266	296	309
G [mm]	263	293	273	303	307	339	355	385	398	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	180 and up	193 and up	230 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.

TECHNICAL DRAWINGS



TR 150			TR 200			TR 270			TR 380			TR 550
11 – 15			14 – 20			19 – 27			26 – 38			32 – 55
–	Standard	XL	–	Standard	XL	–	Standard	XL	–	Standard	XL	
–	52	160	–	52	160	–	52	200	–	–	240	500
RB 200			RB 200			RB 270			RB 380			RB 550
159 and up			159 and up			260 and up			498 and up			By request
210.000			210.000			400.000			520.000			
180.000			180.000			250.000			310.000			
4.700			4.700			8.000			12.500			
6 @ 45 l/min.			6 @ 45 l/min.			6 @ 55l/min.			6 @ 80 l/min.			
1.700			1.800			2.000			2.200			

BVC-R 140 (more powerful version)	BVC-R 160	BVC-R 200	BVC-R 240	By request
110°	110°	110°	110°	
21 l/min.	26 l/min.	44 l/min.	68 l/min.	
2.08	2.53	4.32	6.72	
10.500	15.000	21.000	38.000	
28.000	38.000	52.000	90.000	
122	145	204	358	

268			268			292			388			By request
215			215			280			388			
296	328	340	305	337	349	333	335	391	432	480	505	
415	447	459	441	473	485	476	478	534	602	650	675	
585			585			726			818			
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	856 and up	898 and up	1160 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.