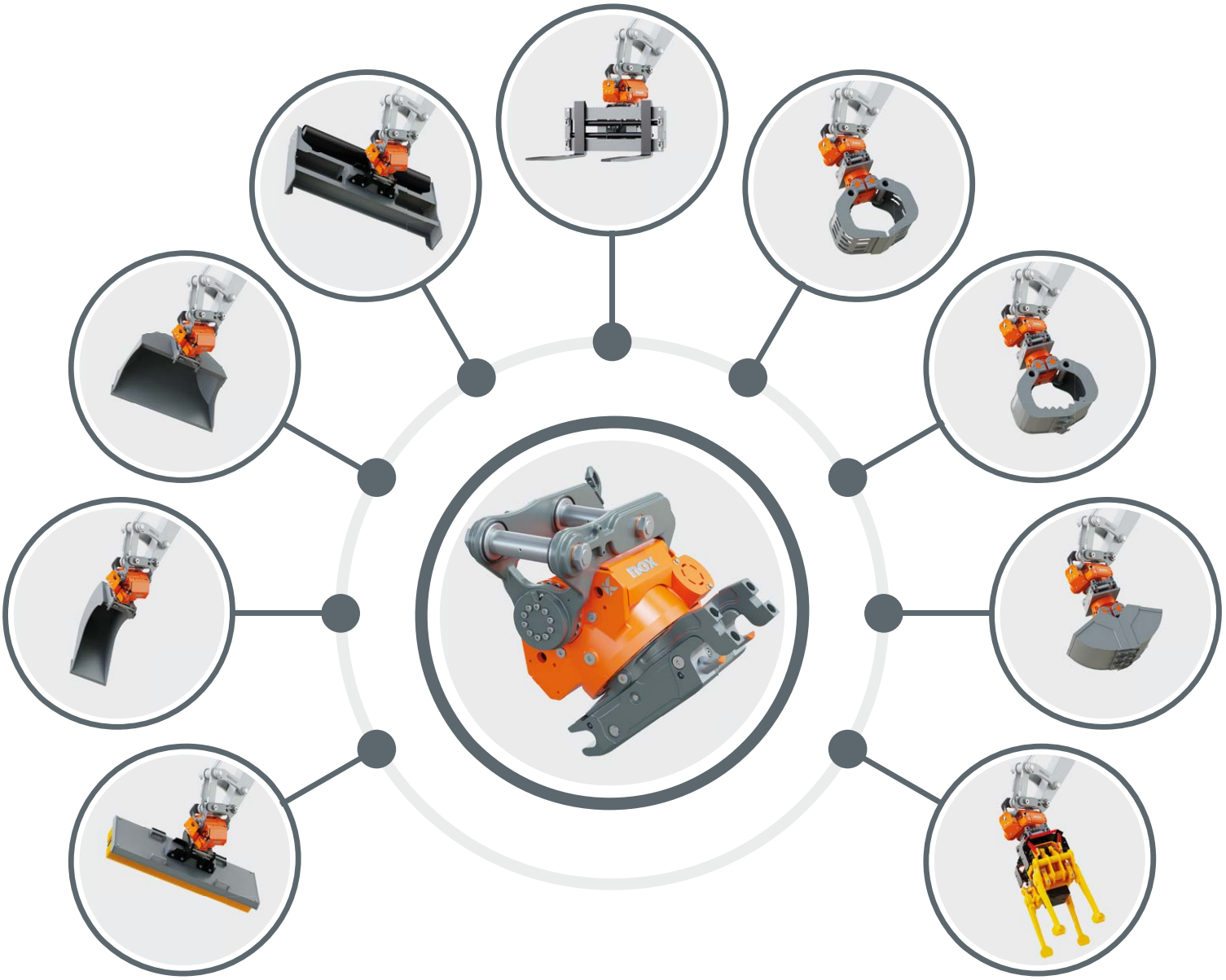
2026-V1

KINSHOFER GROUP COMPANY

KINSHOFER crane and excavator attachments

NOX Tiltrotators and Accessories



nox TILTROTATORS

INCREASED PRODUCTIVITY

NOX Tiltrotators enable operators to manage the same amount of work in less time, enhancing overall efficiency.

ENHANCED SAFETY

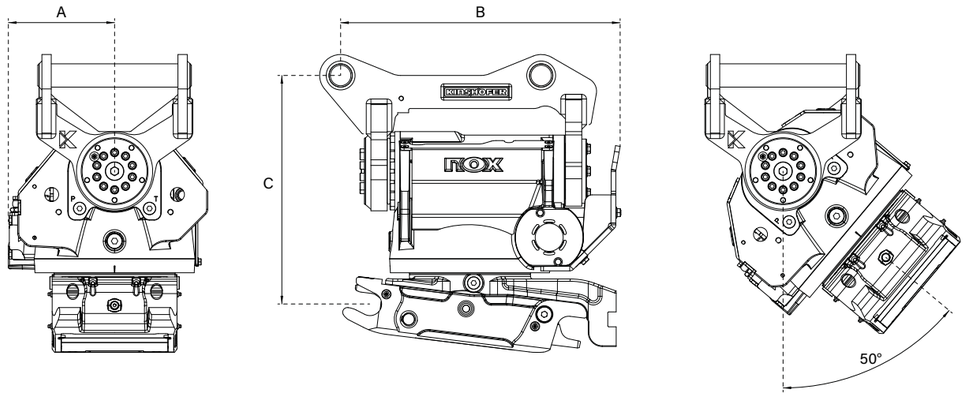
NOX Tiltrotators help in creating an accident-free environment by complying with current safety regulations and assisting the operator and surrounding workforce.

IMPROVED FLEXIBILITY

The NOX Tiltrotator dramatically increases the range of tasks a machine can perform, allowing the user to accept a greater variety of jobs.

FUTURE-PROOF TECHNOLOGY

The NOX Tiltrotators are GPS-ready and compatible with modern 3D Machine control systems, which can be implemented during initial installation or retroactively.



With our NOX Tiltrotator, your attachments can be rotated by 360° continuously and tilted by up to 50° to both sides.
Therefore, the efficiency of your machine will be increased dramatically as time and resources will be saved.

	TR045NOX	TR07NOX	TR11NOX	TR14NOX	TR19NOX	TR25NOX
Operating weight	2.5-4.5 t / 5,500-9,900 lbs	4-7 t / 8,800-15,400 lbs	6-11 t / 13,200-24,200 lbs	10-14 t / 22,000-30,800 lbs	14-19 t / 30,800-41,800 lbs	19-25 t / 41,800-55,000 lbs
Weight* (from)	150 kg / 330 lbs	200 kg / 440 lbs	320 kg / 704 lbs	485 kg / 1,067 lbs	580 kg / 1,276 lbs	860 kg / 1,892 lbs
Width A* (from)	190 mm / 7.5 in	205 mm / 8.1 in	215 mm / 8.5 in	240 mm / 9.4 in	230 mm / 9.1 in	260 mm / 10.2 in
Length B* (from)	435 mm / 17.1 in	460 mm / 18.1 in	580 mm / 22.8 in	610 mm / 24 in	645 mm / 25.4 in	845 mm / 33.2 in
Height C* (from)	380 mm / 19.9 in	420 mm / 16.5 in	475 mm / 18.7 in	565 mm / 22.2 in	580 mm / 22.8 in	650 mm / 25.5 in
Recomm. bucket width max.	1,100 mm / 43.3 in	1,200 mm / 47.2 in	1,300 mm / 51.1 in	1,600 mm / 62.9 in	1,700 mm / 66.9 in	2,000 mm / 78.7 in
Breakout force max. (ISO)	40 kN / 8,800 lbf	50 kN / 11,000 lbf	75 kN / 16,500 lbf	110 kN / 24,200 lbf	150 kN / 33,000 lbf	170 kN / 37,400 lbf
Breakout torque max.	29 kNm / 21,388 ft.lbs	40 kNm / 29,500 ft.lbs	79 kNm / 58,263 ft.lbs	145 kNm / 106,938 ft.lbs	200 kNm / 147,500 ft.lbs	250 kNm / 184,375 ft.lbs
Tilt angle	2 x 45°	2 x 50°	2 x 50°	2 x 50°	2 x 50°	2 x 50°
Tilt torque (constant)	6.5 kNm / 4,794 ft.lbs	11 kNm / 8,113 ft.lbs	16 kNm / 11,800 ft.lbs	31 kNm / 22,863 ft.lbs	40.5 kNm / 29,869 ft.lbs	51.7 kNm / 38,129 ft.lbs
Rotation speed	8.5 per min	8.5 per min	8.5 per min	8.5 per min	8.5 per min	8.5 per min
Rotation torque	3,800 Nm / 2,803 ft.lbs	4,700 Nm / 3,466 ft.lbs	7,500 Nm / 5,531 ft.lbs	11,000 Nm / 8,113 ft.lbs	12,000 Nm / 8,850 ft.lbs	15,000 Nm / 11,063 ft.lbs
Hydraulic pressure max.	21 MPa / 3,024 psi	25 MPa / 3,600 psi	27 MPa / 3,888 psi	30 MPa / 4,320 psi	30 MPa / 4,320 psi	30 MPa / 4,320 psi
Recomm. pump capacity CSP	30-80 l/min / 7.9-21.1 GPM	30-80 l/min / 7.9-21.1 GPM	40-100 l/min / 10.5-26.4 GPM	80-160 l/min / 21.1-42.2 GPM	100-180 l/min / 26.4-47.6 GPM	120-200 l/min / 31.7-52.8 GPM
Recomm. pump capacity DF04/06/10	15/32 l/min / 3.9/8.4 GPM	15/32 l/min / 3.9/8.4 GPM	21/40 l/min / 5.5/10.5 GPM	40/45 l/min / 10.5/11.8 GPM	60/50 l/min / 15.8/13.2 GPM	70/70 l/min / 18.4/18.4 GPM
Electric swivel	-	optional	optional	optional	optional	optional

*Specifications depend on the machine configuration (upper bracket and lower quick coupler)

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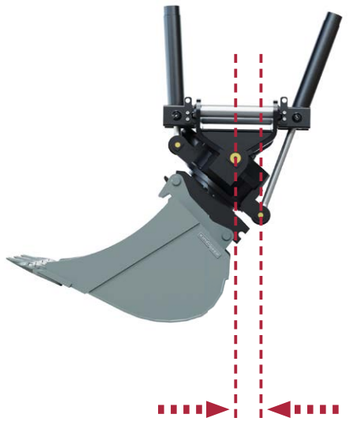
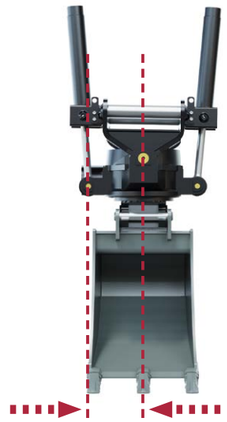
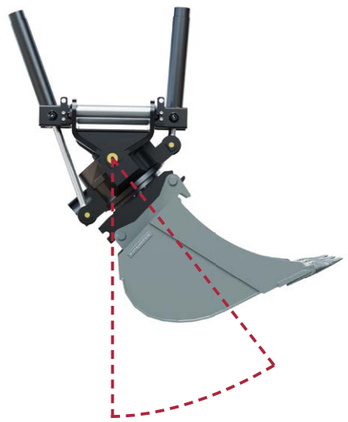


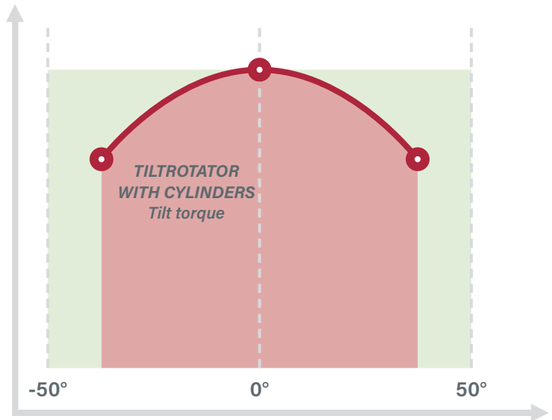
TILTROTATOR WITH CYLINDERS
Minimum pivot point distance

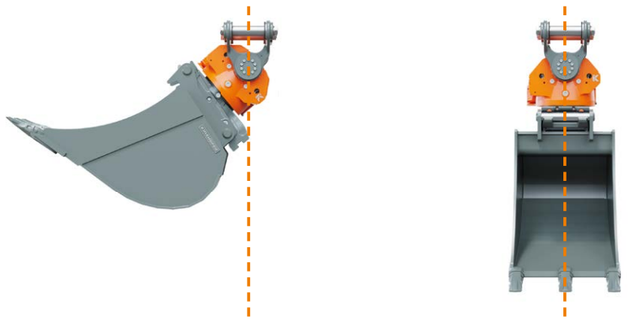


TILTROTATOR WITH CYLINDERS
Maximum pivot point distance

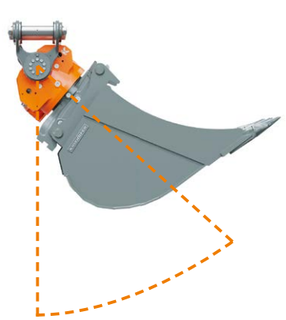


TILTROTATOR WITH CYLINDERS
Narrow tilt angle

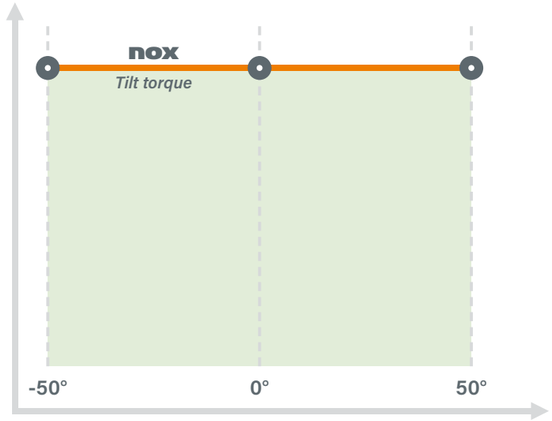




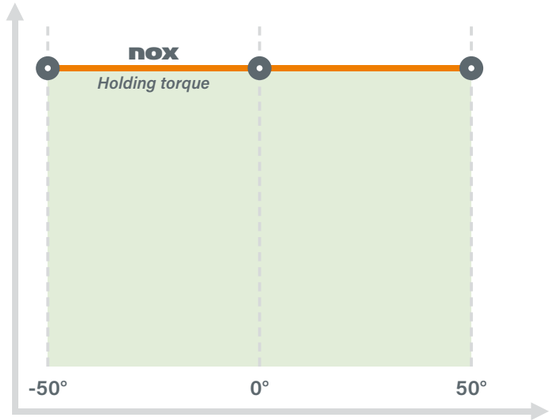
NOX TILTROTATOR
No pivot point, therefore high and constant tilt torque



NOX TILTROTATOR
Maximum tilt angle (max. 2 x 50°)



NOX TILTROTATOR
Pilot check valve ensures a high holding torque



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nox *Tilt torque*

The cylinderless, extremely flat drive provides for a very low height as well as a narrow width. An elliptic piston generates a high and constant tilt torque thanks to its single gearing. The robust cast housing features a high stability due to a special material alloy, guaranteeing a long life even under the toughest conditions. The extremely rugged and strong drive for difficult tasks has a proper greasing and is thus low-maintenance.

nox
ELLIPTIC PISTON

nox *Tilt angle*

360° continuous rotation and up to 2 x 50° tilt angle turn your machine into a multifunctional allrounder, increasing the flexibility and efficiency of all your attachments.

nox *Holding torque*

The NOX Tiltrotators are equipped with counter-balance valves, providing firm load holding in the desired position.

nox TILTROTATOR

SYSTEM:

UPPER BRACKET & LOWER QUICK COUPLER

The Tiltrotator can be mounted directly to the excavator arm (direct mount) or it can be "Sandwich" mounted to the excavator by a quick coupler. Preferably, the excavator coupler is the same as the lower quick coupler on the NOX Tiltrotator, but it is not necessarily required. The Tiltrotator can thus be uncoupled and coupled again in no time. The lower quick coupler allows for a safe and fast exchange between attachments.

DESIGN:

SELF-CONTAINED UNIT

The compact design with its fully integrated tilt and rotation unit provides highest safety against damage. There are no protruding cylinders or piston rods that can be damaged, increasing the reliability of the NOX. In addition, the low design maintains higher breakout forces of the machine.

SET-UP:

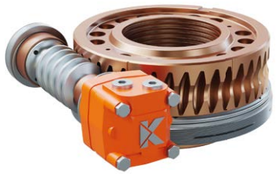
COMPACT DESIGN

The cylinderless, extremly low and narrow built drive unit allows for very narrow bucket width, that are usually not wider than the excavator boom. Therefore, digging down in deep trenches becomes possible and very easy.

SAFETY:

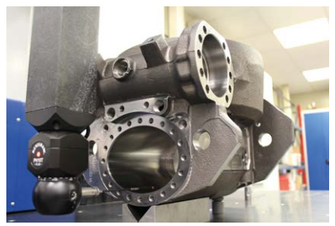
SAFE WORKING AREA

The increased working radius reduces the need for repositioning your excavator to a minimum. Manual works such as manual digging in the danger zone by a co-worker are not necessary, as these works can be managed from the excavator cabin with the NOX Tiltrotator. The S-Lock quick coupler with front-lock prevents the attachments from falling down unintendedly.



WORM DRIVE

The oversized worm gear absorbs shock loads with ease. The compact diameter and yet high torque ensures a very slim design, hence keeps the overall width of the NOX extremely small.



HOUSING

The robust cast housing features a high stability due to a special material alloy, guaranteeing a long life even under the toughest conditions. The integrated motor cover protects the hydraulic motor of the worm drive from damage from below. The quality of our precision components is ensured by 3D coordinate measuring machines with tactile and optical measuring sensors.

HIGH-FLOW SWIVEL

The optional high-flow swivel provides industry leading flows for attachments that require more flow to operate properly. As an option, an electric rotary unit for quick coupler sensors and attachments with switch valve (mainly in railway construction) can be used.

INTEGRATED GRIPPER TRG

With the integrated gripper you get an additional attachment for handling poles, tubes and curb stones. The gripper is integrated at the lower quick coupler and does not affect the height or the attachment cross-movement.

Gripper module also available as attachment version F-H with different adapter systems.

RAILROAD GRIPPER RR-TRG

The RR-TRG gripper has been designed espacially for heavy duty tasks, such as gripping railroad sleepers or rails. The extremely strong gripper module has been constructed for efficient gripping at a 40° angle. The gripper unit can be removed quickly and easily.

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nox *Benefits*

FLEXIBLE OPERATION

Fast and uncomplicated response to requirements to be more competitive.

HIGHER SAFETY

Manual works within the danger area are reduced to a minimum.

LESS WEAR

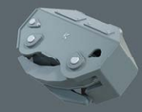
The compact and extremely robust design without hydraulic cylinders lowers the risk of damages.

HIGHER EFFICIENCY

Working more efficiently saves consumables and labor costs and reduces the required working times. The tasks can thus be finished faster and the wear is kept to a minimum.

nox *Optional accessories*

TRG gripper



RR-TRG gripper

TYPE	OPENING	CLOSING TIME	CLOSING FORCE	CAPACITY
TRG07	424 mm / 16.6 in	1.5 sec.	7.5 kN / 1,650 lbf	300 kg / 660 lbs
TRG11	644 mm / 25.3 in	1.5 sec.	10 kN / 2,200 lbf	500 kg / 1,100 lbs
TRG19	825 mm / 32.4 in	3.0 sec.	18.5 kN / 4,070 lbf	900 kg / 1,980 lbs
TRG25	1,050 mm / 41.3 in	2.0 sec.	19.5 kN / 4,290 lbf	1,400 kg / 3,080 lbs
RR-TRG	822 mm / 32.3 in	3.9 sec.	30.1 kN / 6,622 lbf	5,000 kg / 11,000 lbs

The RR-TRG gripper is only available for TR19NOX and TR25NOX.

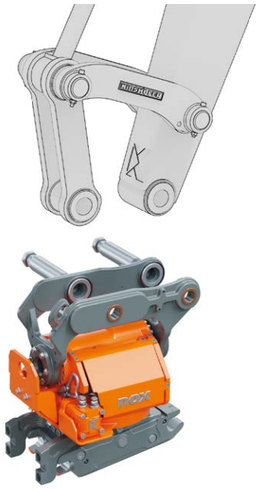
nox FLEXIBILITY

MOUNTING TO EXCAVATOR ARM

When mounting the NOX Tiltrotator directly to the excavator dipper, the tiltrotator can use its maximum force.
The "Sandwich" mounted Tiltrotator features a quick coupling adapter at the top to accept pick up by the machine coupler.

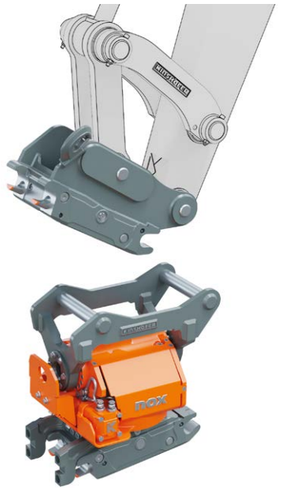
DIRECT MOUNT

► Lower height
► Higher force transmission



"SANDWICH"-STYLE MOUNT

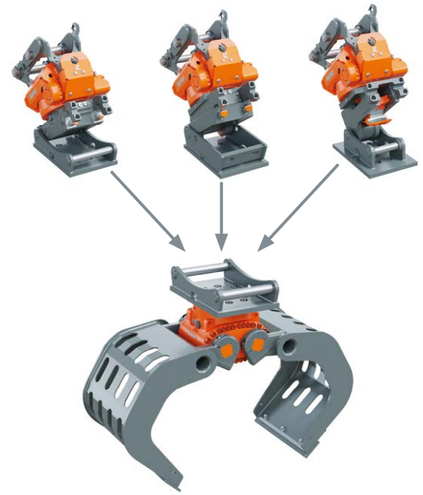
► Can be used with different excavators of the same class
► Can be uncoupled to use attachments that do not require a Tiltrotator



QUICK CHANGE ADAPTATIONS:

COMPATIBLE ADAPTATIONS FOR YOUR REQUIREMENTS

All attachments can be supplied with the compatible L-Lock, S-Lock or D-Lock adaptors. To ensure compatibility with your existing systems, Kinshofer also offers adaptations for all common quick change systems.



FULLY HYDRAULIC QUICK COUPLER SYSTEMS

SYSTEM OPEN-S

SYSTEM OILQUICK

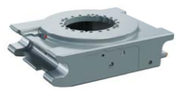
SYSTEM LIEBHERR & SYSTEM LIEBHERR + LIKUFIX

HYDRAULIC QUICK COUPLER SYSTEMS

SYSTEM S-LOCK

SYSTEM L-LOCK

SYSTEM D-LOCK



SYSTEM OILQUICK

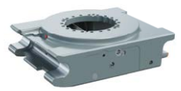
SYSTEM VERACHTERT

SYSTEM LIEBHERR

MECHANIC QUICK COUPLER SYSTEMS

SYSTEM S-LOCK

SYSTEM L-LOCK



SYSTEM OILQUICK

SYSTEM LIEBHERR

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POWERED BY KINSHOFER nox

nox
Functional exchange, depending on demands!

As a global company we know that customers of different regions become familiar with certain styles and characteristics of products, including quick couplers.

We constantly improve our designs for higher productivity and greater safety and we also understand that customers may already own existing products which require a compatible coupler solution to keep on usig them. We are generally differentiating between three different quick coupler systems:

FULLY HYDRAULIC QUICK COUPLERS

Fully hydraulic quick couplers connect the worktool mechanically as well as hydraulically without leaving the cabin. No need to connect hoses anymore.

HYDRAULIC QUICK COUPLERS

The hydraulic quick coupler allows for an efficient and safe mounting of the attachment without leaving the cabin. The spring-pretensioned locking pins provide for a force-fit connection without play. Besides the special spring-locking system, the carrier pin (system S-Lock) is also secured mechanically. The attachment cannot get loose.

MECHANIC QUICK COUPLERS

An automatic spring-locking system facilitates the coupling of the tool. By simply turning a socket, the coupler is opened or closed for the tool exchange. This provides a high functional safety; the spring loaded system is over-center locking. Besides the special spring-locking system, the carrier pin is also secured mechanically.

nox CONTROL

NOXProp+

CSP - CONTROL SYSTEM

Although this control system only requires one hydraulic function from the excavator, all Tiltrotator functions can be used at the same time. Also functions like steering/driving control, boom swing and dozer blade etc. can be controlled optionally. All functions are controlled proportionally and a separate control system is installed at the excavator. The joysticks of the machine will be replaced by new joysticks provided by KINSHOFER.

KEY FEATURES NOXProp+

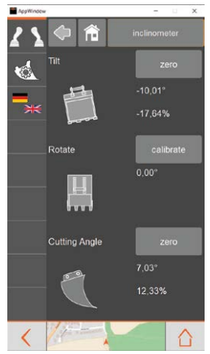
- ► Optimal NOX performance thanks to perfectly adjusted control
- ► Bright and high-definition touchscreen
- ► Autocalibration
- ► Position indicator at the display
- ► 4 different user profiles with up to 10 tool profiles (more flexibility)
- ► CAN Bus system
- ► All main settings can be adjusted directly on the touchscreen, no laptop/smartphone necessary
- ► Direct mode: When the NOX is disconnected, it is possible to control the original AUX lines in both directions
- ► Connectivity (WiFi, LTE, GPS, Bluetooth)
- ► Easy installation
- ► Integration with 2D/3D excavation system - NOXGeo
- ► BIM-ready

NOXProp+
TOUCHDISPLAY

TOUCHDISPLAY:

ERGONOMIC CONTROL UNIT

- ► Highly bright display - legible even at direct sunlight
- ► Easy switch between different profiles
- ► Locking/unlocking of quick coupler
- ► Sensor control of the quick coupler
- ► Tool profile settings
- ► Adjustment of single function speed
- ► Reliable ram mount



Geometry overview of attachment and interface to 2D/3D systems

Individual function configuration of joystick buttons

DF04

CONTROL SYSTEM

The DF04 control system requires 2 double-acting hydraulic circuits. Only two functions, e.g. rotation and tilting, can be realized simultaneously. In order to control the attachment or the quick coupler, one of the two hydraulic circuits is separated by a switch valve, installed on the NOX Tiltrotator. Therefore, up to two extra functions, e.g. quick coupler, can be realized.

MACHINE REQUIREMENTS FOR DF04

- ► Hydraulic rotation circuit to control the NOX rotation
- ► Hydraulic circuit with high flow controls tilt, additional functions and quick coupler
- ► Control system for switch between tilt, additional functions and quick coupler
- ► One free ON/OFF button at existing joysticks to control the switch between the different functions

DF04 CONTROL UNIT

DF06

CONTROL SYSTEM

The DF06 control system requires 2 double-acting hydraulic circuits for the rotation and tilt movement of the NOX Tiltrotator. For the use of a hydraulic quick coupler, an additional circuit is required. The tilt function can be switched by pressing a button on the joystick to the extra function controlling e.g. the opening and closing of a grab.

MACHINE REQUIREMENTS FOR DF06

- ► Hydraulic rotation circuit to control the NOX rotation
- ► Hydraulic circuit with high flow controls tilt and extra function, e.g. grab
- ► Control system to switch between tilt and extra function
- ► One free ON/OFF button at existing joysticks to control the switch between tilt and extra function
- ► Original joysticks remain
- ► No additional control required - all hydraulic circuits on the excavator
- ► Each function needs a double-acting hydraulic circuit

DF10

DIRECT FEED SYSTEM

The DF10 control system requires at least 2 double-acting hydraulic circuits for the rotation and tilt movement of the NOX Tiltrotator. Including the lines of the quick coupler function, two other hydraulic circuits, e.g. open/close grab and open/close intergrated gripper, can be connected to the NOX Tiltrotator. Furthermore, an additional drain line can be installed.

MACHINE REQUIREMENTS FOR DF10

- ► For complete control of the NOX, 4 double-acting hydraulic circuits are required: rotation, tilt, extra function 1 and extra function 2 (gripper), one quick coupler circuit
- ► Special solution: division of one hydraulic circuit with a switch valve, so two different functions can be controlled by one control circuit. The switch valve has to be installed at an adequate place at the carrier machine or the NOX
- ► No additional control required - all hydraulic circuits on the excavator
- ► Original joysticks remains
- ► No valves or cables on the NOX required
- ► Each function needs a double-acting hydraulic circuit
- ► Minimal configuration: 2 hydraulic circuits (tilt and rotation) when mechanical quick coupler and no hydraulic attachment

MiC4.0

CONTROL SYSTEM

The MiC4.0 NOX tiltrotator is connected to the MiC4.0-compatible excavator via plug & play and only requires a single-acting hydraulic circuit (hammer line). All functions of the tiltrotator can be used simultaneously (CSP) or 2 double-acting hydraulic circuits, and only two functions, e.g., rotation and tilt, can be performed at the same time (DF04). No technical adjustments are necessary on the excavator; the original joysticks and displays are used. The tiltrotator communicates with the excavator via the standardized MiC4.0 bus (communication interface between excavator and attachments). Special functions on the joysticks, such as steering/driving functions, etc., can still be used.

MACHINE REQUIREMENTS FOR MiC4.0

- ► MiC4.0 pre-equipped excavator
- ► CSP: One single-acting hydraulic circuit (hammer line)
- ► DF04: Two double-acting hydraulic circuits
- ► Original joysticks remain
- ► Original display remains

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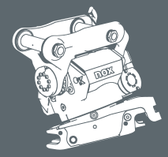
POWERED BY KINSHOFER nox

noxProp+ *Control system*

The NOXProp+ control system provides more safety and precision. NOX Tiltrotator, quick coupler and attached tools are controlled effectively and conveniently with ergonomic joysticks by the smart NOXProp+. Easily retrofittable for each excavator.
Features are the individual function setting and the easy menu navigation thanks to the corresponding touchscreen. Integrated GPS, LTE, Bluetooth and WiFi link your machine with the digital workplace.

nox Tiltrotators *with MiC4.0 ready excavators*



MiC 4.0 BUS

nox Tiltrotator is equipped with MiC4.0-System

MiC 4.0 BUS

Connect pre-equipped excavator and nox Tiltrotator via Plug & Play

MiC 4.0 READY

Use the benefits of the nox Tiltrotator without additional installation

nox CONTROL

JOYSTICKS

CSP - JOYSTICKS

The L8 is the multifunctional ergonomic joystick grip that has set a new standard with its innovative, functional design. You can control two roller functions simultaneously with your thumb and index finger. Up to three rollers can be installed, two for the thumb and one for the index finger. On the grip there is room for up to nine buttons, meaning that most functions can be gathered in a small area. (Joysticks must be replaced when CSP - NOXProp+ is installed.)

STANDARD-JOYSTICK
FRONT

STANDARD-JOYSTICK
BACK

JOYSTICK OPTIONS:

OPTIONALLY CUSTOMIZABLE CONFIGURATIONS

F-N-R
JOYSTICK OPTION

ADDITIONAL PROP
JOYSTICK OPTION

ADDITIONAL PROP & F-N-R
JOYSTICK OPTION

	NOXProp+	DF04	DF06	DF10
NOXGeo (GPS-ready)	✓	●	●	●
Autocalibration	✓	–	–	–
Angle position indication	✓	–	–	–
Individual operator settings	✓	–	–	–
Individual speed setting	✓	–	–	–
Touchscreen in cabin	✓	–	–	–
Trouble shooting on display	✓	–	–	–
Connectivity tools (Bluetooth, LTE, WiFi)	✓	–	–	–
Fully proportional control	✓	depending on machine	depending on machine	depending on machine
Changing roller position	✓	–	–	–
Individual tool settings	✓	–	–	–
Tilt, rotation & extra in same movement	✓	–	–	depending on machine
High flow attachment	●	–	–	●
Quick coupler safety sensors	●	–	–	–
Quick coupler control	✓	–	–	–
Driving/steering function	●	–	–	–
Fleet management	●	●	●	●
Machine assistance systems	●	–	–	–

✓ Standard ● Optional – Not available

CSP-NOXProp+
HYDRAULIC LINES

DF04
HYDRAULIC LINES

DF06
HYDRAULIC LINES

DF10
HYDRAULIC LINES

nox
Perfectly adjusted to suit the operator's requirements!

Adjusting excavator joysticks is not just a matter of comfort, but an essential investment in operator health, work quality, and overall efficiency.

PRECISION AND EFFICIENCY:
- ► Improved fine control
- ► Lower number of mistakes
- ► Higher productivity

ERGONOMICS AND SAFETY:
- ► Prevention of fatigue and injuries
- ► Comfort during long periods of use
- ► Faster response times
- ► Reduction in accidents

nox
Always the right control system depending on the machine's hydraulic configuration

The table provides a quick overview on the different functions and for which control system they are available. Short summary on machine requirements:

CSP: NOXProp+
Hammer/shear circuit

DF04
2 x proportional double-acting circuits

DF06
2 x proportional double-acting circuits (tilt and rotation)
1 x hydraulic quick coupler circuit

DF10
2 x proportional double-acting circuits (tilt and rotation)
1 x hydraulic quick coupler circuit
1 x double-acting high pressure circuit (compactor)
1 x double-acting low pressure circuit (gripper)

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NOX SENSORS

NOXGeo

SENSOR TECHNOLOGY

With the NOXGeo, sensors send position data to the digital control at the NOXprop+ touchscreen in the driver's cabin. Thereby, the attachments are connected to the digital technology of the excavator/machine control. The NOXGeo system also allows the functionality to interface with 2D/3D systems of all common manufacturers thanks to the open system.

GPS

INTEGRATION OF 2D/3D SYSTEMS

It is possible to integrate various makes of GPS into the NOX control system. Thanks to the GPS you can use the excavator to collect and define points. Connect the computer of the machine via the integrated GSM-modem to get fast support and transfer data. With our 3D-system you can take the last step towards machine control.

Leica Geosystems · TOPCON · iDig · Trimble · MOBA MOBILE AUTOMATION

TILT SENSOR

TILT MOVEMENT

The exact position of the tiltrotator's tilt movement and the attachment is transferred directly to the control display in the driver's cabin by means of the tilt sensor.

ROTATION SENSOR

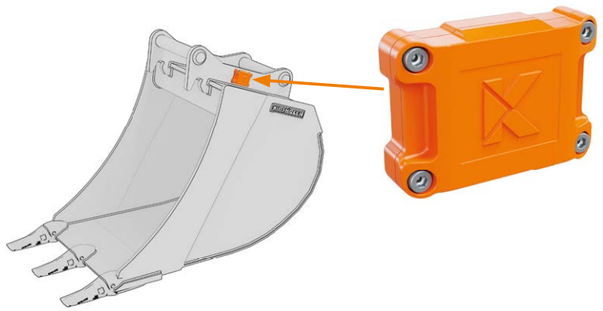
ROTATION MOVEMENT

The KINSHOFER rotation sensor shows the exact position of the tiltrotator and the attachment during rotation. The determined data is transferred directly to the control display in the driver's cabin.

SYSTEM:

SMARTTAG

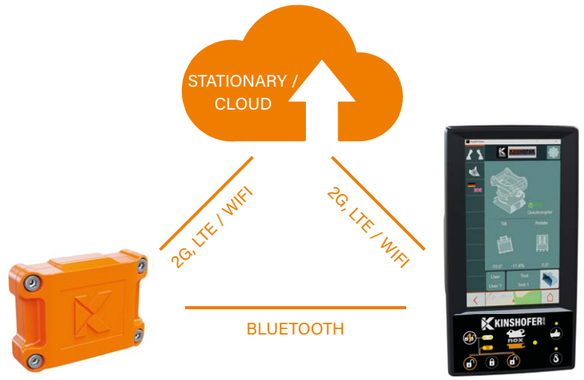
The SmartTag is a microcontrol-based tool with a communication functionality via mobile radio and an internal storage to locally back up operating information, error information, etc. The unit only measures 15 cm, it is waterproof, shock resistant, thermo-stable from -25 up to 80 °C, shockproof and has an internal energy supply for approx. 2 years.



NETWORKING:

DATA EXCHANGE

The tool management system consists of a SmartTag at the attachment as well as its interconnection with the terminal and/or cloud. The SmartTag measures vibrations and positions of the attachment. This information is directly transferred to the cloud via LTE and is thus independent from the machine. From there, the data can be read with every terminal device. The way, frequency and send release of the data exchange can be set individually.



SMARTTAG

FUNCTIONS

GPS-TRACKING
The function GPS-tracking is used to detect the location of an attachment by entitled persons.

DIGITAL TYPE PLATE
The digital type plate provides the identical data as does the mechanical type plate like serial number, name and weight, as well as operating pressure.

PREVENTIVE MAINTENANCE
This function is used for issuing a service recommendation in which a preventive service for the respective attachment will be recommended in order to prevent downtimes.

FLEET MANAGEMENT CONNECTION

ACCELERATION MEASUREMENT
This function of the three-axle acceleration sensors is the detection of the attachment's position as well as of shock values.

BLUETOOTH-CONNECTIVITY
for tool recognition.

THEFT PROTECTION
This function shall be used to find an attachment by locating.

WORKING HOURS
Especially important for rental companies - working hours can be recorded and reported.

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noxGeo *Sensor technology*

By means of the sensors, the manual staking out of the work area by a person is reduced, as the precise dimensioning is shown on the display in the driver's cabin. The controlled and exact excavation of the required amount results in large time savings and reduced fuel consumption. Furthermore, the attachments and the carrier wear less.

KINSHOFER equips the NOX Tiltrotator with the rotation sensor, the tilt sensor comes from the 2D/3D system provider. In combination with certain excavator systems and makes, the NOXGeo system allows for an auto-turning function.

nox SmartTag - *Tooltracker*

The SmartTag and the cloud-based tool management support the driver and operator with the efficient choice and detection of suitable tools for each special task. Operators have their complete fleet under control and thus avoid downtimes and maximize their tool workload.

The SmartTag combines two up to now separated functions in one sensor: tool detection and tracking. As digital type plate, the tool tracker files information on geometries, name, manufacturer, year, ID and operation (e.g. required operating pressure of attachment). At the same time, it gathers, analyzes and detects operating hours, cycles and work processes. Thansk to GPS position and timestamp, you receive data like when and where an attachment had been put down and how it had been used.

nox ATTACHMENTS

LANDSCAPING

The NOX Tiltrotator provides a third dimension, resulting in a reduced need to reposition your carrier machine. Ground damages and subsequent recultivation works are minimized. When laying out a garden or protecting slopes from erosion, the functionality of the NOX strongly shortens the construction time.

CABLE DUCT WORKS

The NOX Tiltrotator enables precise working under, in between or close to already existing cables. By tilting and turning the attachment in the required position, you can reduce manual cable duct works. When maintaining existing cable ducts or installing new ones, works can be realized much more effectively and after all more safely.

ROAD CONSTRUCTION

When constructing roads, time is a crucial factor, but also precision and safety when e.g. levelling grounds, working at embankments or excavating soil. Thanks to the tilt and turn function of the NOX Tiltrotator, all works can be managed safely from the driver's cabin and less manpower is required in the danger area.

GENERAL CONSTRUCTION

Excavation or filling works can be realized precisely thanks to the NOX Tiltrotator with its tilt and turn function. The work can be done within the reach of the excavator arm without repositioning the carrier machine in a faster and more profitable way. The working safety on site is also increased when handling construction material.

MATERIAL HANDLING

Precise handling of e.g. palletized curbstones is no problem with the NOX Tiltrotator. The high and constant holding torque allows for a safe holding of loads. When operating in narrow areas, loads can be held e.g. around scaffolding or lifted over a fence.

RAIL CONSTRUCTION

Thanks to the NOX Tiltrotator, a lot of works that are difficult or impossible in rail construction due to the limited lateral mobility of the carrier machine can be realized. Works under already existing rails or at slopes as well as the exact positioning of sleepers are possible without repositioning the excavator thanks to the tilt and turn function.

SEWAGE WORKS

Working in sewer systems is characterized by little space and narrow areas. With a NOX Tiltrotator you can easily dig around gully wells or excavate from the required angle without repositioning the excavator. The endless rotation and the tilt angle to both sides allows for the exact positioning of the attachment.

DEMOLITION

The immediate separation of debris at the demolition site saves a lot of time and recycling costs. Some building materials have to be disposed separately and with the NOX Tiltrotator you can separate those precisely from the other materials. After loading the material, the construction site can be cleared with e.g. a brush mounted to the NOX.

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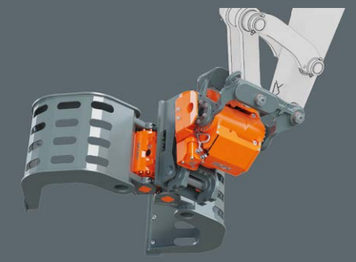
POWERED BY KINSHOFER

nox

Large variety of KINSHOFER attachments

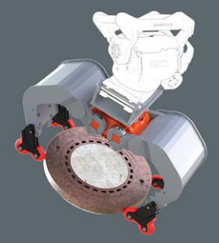


4-Grip clamping device

Easy mounting - easy handling of your tasks: that is our new 4-Grip for our demolition and sorting grabs of the D-series up to 9t operating weight as well as our multi purpose grabs of the A-series up to 9t. The device is easily bolt onto the shells and you can grab concrete units, curbstones etc. smoothly.

Thanks to its special kinematics you can grab items not only when closing the shells but also when opening. Shaft rings can be loaded and unloaded fast and easy without damaging them!

- **Economic solution**, as it is only an accessory that increases the flexibility of your attachment
- **Robust design**
- **Plastic compression rolls** avoid damage of the material to be gripped
- **Fast and easy mounting and removal** on site
- **Low additional weight:** only 28 kg / 61.6 lbs in total
- **High load capacity of max. 900 kg / 1,980 lbs (depending on model)**



TILTROTATOR TR045NOX

Type	Breakout force max. (ISO) (kN/lbf)	Tilt angle (°)	Tilt torque constant (kNm/ft.lbs)	Rotation torque (kNm/ft.lbs)	Weight (from kg/lbs)	Operating weight (t/lbs)
TR045NOX	40 / 8,800	2 x 45°	6.5 / 4,794	3.8 / 2,803	150 / 330	2.5 - 4.5 / 5,500 - 9,900

Standard package: TR045NOX, upper bracket direct mount, quick coupler system S-Lock, NOX-Control DF10

Other adapter, quick coupler & control systems on request.

Transport pallet NOX

Type	Width (mm/in)	Length (mm/in)	Weight (from kg/lbs) depending on adapter
NOX Cargo	800 / 31.5	1,200 / 47.2	100 / 220

Package consists of: transport pallet with adapter

Please specify the quick coupler type.

Gripper module

Type	Opening (mm/in)	Closing force (kN/lbf)	Load capacity (kg/lbs)	Weight (from kg/lbs)
F07H	424 / 16.6	7.5 / 1,650	300 / 660	77 / 169

Package consists of: gripper with integrated adapter

Other adapter systems on request.

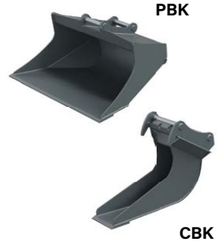
FH

Profile buckets

Type	Bucket types	Adapter	Width (mm/in)	Volume (m^3/ft^3)	Weight (kg/lbs)
PBK04-110-S40	grading bucket	S40	1,100 / 43.3	0.16 / 5.65	131 / 288
CBK04-022-OQ40-5	cable bucket	OQ40-5	220 / 8.6	0.035 / 1.24	64 / 141

Package consists of: grading bucket / cable bucket, adapter

Other bucket types, widths, volumes or adapters on request.



PBK

CBK

Note: Other attachments and adapters from other manufacturers on request

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Attachments for NOX Tiltrotators — TR045NOX

Demolition and sorting grabs with HPXdrive or hydraulic cylinder

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity form locking (kg/lbs)	Operating weight (t/lbs)
D05TR-40 HPX	420 / 16.5	1,045 / 41.1	75 / 0.098	240 / 528	1,500 / 3,300	3-6 / 6,600-13,200
D05TR-40	420 / 16.5	1,212 / 47.7	60 / 0.078	160 / 352	1,500 / 3,300	3-6 / 6,600-13,200

Package consists of: demolition and sorting grab, hydraulic block for HPX, adapter system S-Lock (S40)

Available as an option: 4-Grip

Other adapter systems on request.

Multi purpose grabs with HPXdrive or hydraulic cylinder

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity form locking (kg/lbs)	Operating weight (t/lbs)
A05TR-40 HPX	386 / 15.2	1,043 / 41	70 / 0.09	225 / 495	1,500 / 3,300	3-6 / 6,600-13,200
A05TR-40	386 / 15.2	1,233 / 48.5	70 / 0.09	165 / 363	1,500 / 3,300	3-6 / 6,600-13,200

Package consists of: multi purpose grab, hydraulic block for HPX, adapter system S-Lock (S40)

Available as an option: 4-Grip

Other adapter systems on request.

4-Grip

Type	For grab types	Load capacity (kg/lbs)	Weight (kg/lbs)	Operating weight (t/lbs)
KM 685-05-D04-A04	D05TR / A05TR	600 / 1,320	24 / 52.8	<6 / <13,200

Fork tines

Type	Tine adjustment	Load capacity max. (mm/in)	Tine length (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
PF03M-100	mechanical	1,900 / 74.8	1,000 / 39.3	145 / 319	<3 / <6,600
PF03H-100	hydraulically	1,900 / 74.8	1,000 / 39.3	160 / 352	<3 / <6,600

Package consists of: fork tines, frame with adapter system S-Lock (S40)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

TILTROTATOR TR07NOX

Type	Breakout force max. (ISO) (kN/lbf)	Tilt angle (°)	Tilt torque constant (kNm/ft.lbs)	Rotation torque (kNm/ft.lbs)	Weight (from kg/lbs)	Operating weight (t/lbs)
TR07NOX	50 / 11,000	2 x 50°	11 / 8,113	4.7 / 3,466	200 / 440	4 - 7 / 8,800 - 15,400

Standard package: TR07NOX, upper bracket direct mount, quick coupler system S-Lock, NOX-Control DF10

Other adapter, quick coupler & control systems on request.

Transport pallet NOX

Type	Width (mm/in)	Length (mm/in)	Weight (from kg/lbs) depending on adapter
NOX Cargo	800 / 31.5	1,200 / 47.2	100 / 220

Package consists of: transport pallet with adapter

Please specify the quick coupler type.

Gripper module

Type	Opening (mm/in)	Closing force (kN/lbf)	Load capacity (kg/lbs)	Weight (from kg/lbs)
TRG07	424 / 16.7	7.5 / 1,650	300 / 660	40 / 88
F07H	424 / 16.7	7.5 / 1,650	300 / 660	77 / 169

Package consists of: gripper / gripper with integrated adapter

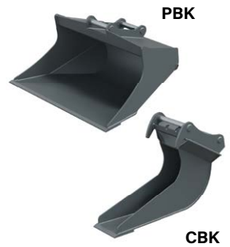
Other adapter systems on request.

Profile buckets

Type	Bucket types	Adapter	Width (mm/in)	Volume (m³/ft³)	Weight (kg/lbs)
PBK05-120-S40	grading bucket	S40	1,200 / 47.2	0.25 / 8.83	174 / 383
PBK06-120-S45	grading bucket	S45	1,200 / 47.2	0.3 / 10.59	199 / 438
CBK05-020-OQ40-5	cable bucket	OQ40-5	200 / 7.8	0.13 / 4.59	75 / 165
CBK06-030-OQ40-5	cable bucket	OQ45	300 / 11.8	0.16 / 5.65	100 / 220

Package consists of: grading bucket / cable bucket, adapter

Other bucket types, widths, volumes or adapters on request.



Levelling bars with roller

Type	Width (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
AVB 8-1800	1,800 / 70.8	200 / 440	<8 / <17,600
AVB 8-2100	2,100 / 82.6	300 / 660	<8 / <17,600
AVB 8-2200	2,200 / 86.6	420 / 924	<8 / <17,600

Package consists of: levelling bar with roller, adapter system S-Lock (S45)

Other adapter systems on request.

Attachments for NOX Tiltrotators — TR07NOX

Demolition and sorting grabs with HPXdrive or hydraulic cylinder

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity form locking (kg/lbs)	Operating weight (t/lbs)
D07TR-45 HPX	470 / 18.5	1,350 / 53.1	150 / 0.19	310 / 682	2,000 / 4,400	5 - 8 / 11,000 - 17,600
D07TR-45	470 / 18.5	1,345 / 52.9	90 / 0.11	180 / 396	2,000 / 4,400	5 - 8 / 11,000 - 17,600

Package consists of: demolition and sorting grab, hydraulic block for HPX, adapter system S-Lock (S45)

Available as an option: 4-Grip

Other adapter systems on request.

Multi purpose grabs with HPXdrive or hydraulic cylinder

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity form locking (kg/lbs)	Operating weight (t/lbs)
A07TR-45 HPX	450 / 17.7	1,344 / 52.9	145 / 0.19	305 / 671	2,000 / 4,400	5 - 8 / 11,000 - 17,600
A07TR-45	450 / 17.7	1,340 / 52.8	100 / 0.13	225 / 495	2,000 / 4,400	5 - 8 / 11,000 - 17,600

Package consists of: multi purpose grab, hydraulic block for HPX, adapter system S-Lock (S45)

Available as an option: 4-Grip

Other adapter systems on request.

Clamshell buckets with HPXdrive

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
C07TR-40 HPX	400 / 15.7	1,110 / 43.7	115 / 0.15	295 / 649	3,000 / 6,600	3 - 7 / 6,600 - 15,400
C07TR-50 HPX	500 / 19.7	1,110 / 43.7	140 / 0.18	310 / 682	3,000 / 6,600	3 - 7 / 6,600 - 15,400
C07TR-60 HPX	600 / 23.6	1,110 / 43.7	170 / 0.22	325 / 715	3,000 / 6,600	3 - 7 / 6,600 - 15,400

Package consists of: clamshell bucket, hydraulic block for HPX, adapter system S-Lock (S45)

Other adapter systems on request.

4-Grip

Type	For grab types	Load capacity (kg/lbs)	Weight (kg/lbs)	Operating weight (t/lbs)
KM 685-05-D06/09-A06/09	D07TR & A07TR	600 / 1,320	28 / 62	<11 / 24,200

Fork tines

Type	Tine adjustment	Load capacity max. (mm/in)	Tine length (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
PF06M-100	mechanical	1,900 / 74.8	1,000 / 39.3	165 / 363	<6 / 13,200
PF06H-100	hydraulically	1,900 / 74.8	1,000 / 39.3	180 / 396	<6 / 13,200

Package consists of: fork tines, frame with adapter system S-Lock (S40)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

TILTROTATOR TR11NOX

Type	Breakout force max. (ISO) (kN/lbf)	Tilt angle (°)	Tilt constant (kNm/ft.lbs)	Rotation torque (kNm/ft.lbs)	Weight (from kg/lbs)	Operating weight (t/lbs)
TR11NOX	75 / 16,500	2 x 50°	16 / 11,800	7.5 / 5,531	320 / 704	6 - 11 / 13,200 - 24,200

Standard package: TR11NOX, upper bracket direct mount, quick coupler system S-Lock, NOX-Control DF10

Other adapter, quick coupler & control systems on request.

Transport pallet NOX

Type	Width (mm/in)	Length (mm/in)	Weight (from kg/lbs) depending on adapter
NOX Cargo	800 / 31.5	1,200 / 47.2	100 / 220

Package consists of: transport pallet with adapter

Please specify the quick coupler type.

Gripper module

Type	Opening (mm/in)	Closing force (kN/lbf)	Load capacity (kg/lbs)	Weight (from kg/lbs)
TRG11	644 / 25.3	10 / 2,200	500 / 1,100	77 / 169
F11H	644 / 25.3	10 / 2,200	500 / 1,100	131 / 288

Package consists of: gripper / gripper with integrated adapter

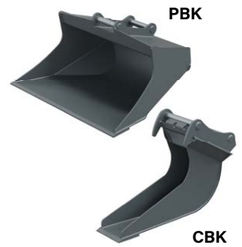
Other adapter systems on request.

Profile buckets

Type	Bucket types	Adapter	Width (mm/in)	Volume (m³/ft³)	Weight (kg/lbs)
PBK08-130-S45	grading bucket	S45	1,300 / 51.2	0.36 / 12.7	262 / 576
CBK08-030-OQ45	cable bucket	OQ45	300 / 11.8	0.25 / 8.8	132 / 290

Package consists of: grading bucket / cable bucket, adapter

Other bucket types, widths, volumes or adapters on request.



Levelling bars with roller

Type	Width (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
AVB 8-1800	1,800 / 70.8	200 / 440	<8 / <17,600
AVB 8-2100	2,100 / 82.6	300 / 660	<8 / <17,600
AVB 8-2200	2,200 / 86.6	420 / 924	<8 / <17,600

Package consists of: levelling bar with roller, adapter system S-Lock (S50)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

Attachments for NOX Tiltrotators — TR11NOX

Demolition and sorting grabs with HPXdrive or hydraulic cylinder

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity form locking (kg/lbs)	Operating weight (t/lbs)
D11TR-50 HPX	520 / 20.4	1,545 / 60.8	220 / 0.28	360 / 792	2,500 / 5,500	7 - 12 / 15,400 - 26,400
D11TR-50	520 / 20.4	1,665 / 65.5	165 / 0.21	305 / 671	2,500 / 5,500	7 - 12 / 15,400 - 26,400

Package consists of: demolition and sorting grab, hydraulic block for HPX, adapter system S-Lock (S50)

Available as an option: 4-Grip

Other adapter systems on request.

Multi purpose grabs with HPXdrive or hydraulic cylinder

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity form locking (kg/lbs)	Operating weight (t/lbs)
A11TR-50 HPX	500 / 19.7	1,545 / 60.8	210 / 0.27	365 / 803	2,500 / 5,500	7 - 12 / 15,400 - 26,400
A11TR-50	500 / 19.7	1,650 / 64.9	175 / 0.22	310 / 682	2,500 / 5,500	7 - 12 / 15,400 - 26,400

Package consists of: multi purpose grab, hydraulic block for HPX, adapter system S-Lock (S50)

Available as an option: 4-Grip

Other adapter systems on request.

Clamshell buckets with HPXdrive

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
C11TR-40 HPX	400 / 15.7	1,250 / 49.2	145 / 0.18	265 / 583	3,000 / 6,600	5 - 11 / 11,000 - 24,200
C11TR-50 HPX	500 / 19.7	1,250 / 49.2	180 / 0.23	295 / 649	3,000 / 6,600	5 - 11 / 11,000 - 24,200
C11TR-60 HPX	600 / 23.6	1,250 / 49.2	220 / 0.28	315 / 693	3,000 / 6,600	5 - 11 / 11,000 - 24,200

Package consists of: clamshell bucket, hydraulic block for HPX, adapter system S-Lock (S50)

Other adapter systems on request.

4-Grip

Type	For grab types	Load capacity (kg/lbs)	Weight (kg/lbs)	Operating weight (t/lbs)
KM 685-05-D06/09-A06/09	D11TR & A11TR	900 / 35.4	28 / 62	<11 / <24,200

Fork tines

Type	Tine adjustment	Load capacity max. (kg/lbs)	Tine length (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
PF12M-120	mechanical	2,500 / 98.4	1,200 / 47.2	220 / 484	<12 / <26,400
PF12H-120	hydraulically	2,500 / 98.4	1,200 / 47.2	240 / 528	<12 / <26,400

Package consists of: fork tines, frame with adapter system S-Lock (S50)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

TILTROTATOR TR14NOX

Type	Breakout force max. (ISO) (kN/lbf)	Tilt angle (°)	Tilt constant (kNm/ft.lbs)	Rotation torque (kNm/ft.lbs)	Weight (from kg/lbs)	Operating weight (t/lbs)
TR14NOX	110 / 24,200	2 x 50°	31 / 22,863	11 / 8,113	485 / 1,067	10 - 14 / 22,000 - 30,800

Standard package: TR14NOX, upper bracket direct mount, quick coupler system S-Lock, NOX-Control DF10

Other adapter, quick coupler & control systems on request.

Transport pallet NOX

Type	Width (mm/in)	Length (mm/in)	Weight (from kg/lbs) depending on adapter
NOX Cargo	800 / 31.5	1,200 / 47.2	100 / 220

Package consists of: transport pallet with adapter

Please specify the quick coupler type.

Gripper module

Type	Opening (mm/in)	Closing force (kN/lbf)	Load capacity (kg/lbs)	Weight (from kg/lbs)
TRG19	734 / 28.8	18.5 / 4,070	900 / 35.4	127 / 279
F19H	734 / 28.8	18.5 / 4,070	900 / 35.4	265 / 583

Package consists of: gripper / gripper with integrated adapter

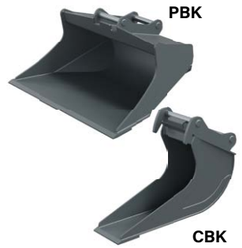
Other adapter systems on request.

Profile buckets

Type	Bucket types	Adapter	Width (mm/in)	Volume (m^3/ft^3)	Weight (kg/lbs)
PBK12-150-S45	grading bucket	S45	1,500 / 59	0.5 / 17.6	356 / 783
PBK15-160-S60	grading bucket	S60	1,600 / 62.9	0.7 / 24.7	480 / 1,056
CBK08-030-OQ45	cable bucket	OQ45	300 / 11.8	0.25 / 8.8	132 / 2,904

Package consists of: grading bucket / cable bucket, adapter

Other bucket types, widths, volumes or adapters on request.



Levelling bars with roller

Type	Width (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
AVB 24-2500	2,500 / 98.4	420 / 924	<24 / <52,800
AVB 24-2700	2,700 / 106.2	470 / 1,034	<24 / <52,800

Package consists of: levelling bar with roller, adapter system S-Lock (S60)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

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Attachments for NOX Tiltrotators — TR14NOX

Demolition and sorting grabs

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
D14TR-60	600 / 23.6	1,555 / 61.2	260 / 0.34	400 / 880	3,000 / 6,600	11 - 14 / 24,200 - 30,800

Package consists of: demolition and sorting grab, adapter system S-Lock (S60)

Other adapter systems on request.

Multi purpose grabs

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
A14TR-60	600 / 23.6	1,890 / 74.4	260 / 0.34	510 / 1,122	3,000 / 6,600	11 - 14 / 24,200 - 30,800

Package consists of: multi purpose grab, adapter system S-Lock (S60)

Other adapter systems on request.

Clamshell bucket

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
C14TR-60	600 / 23.6	1,645 / 64.7	245 / 0.32	510 / 1,122	4,500 / 9,900	11 - 14 / 24,200 - 30,800

Package consists of: clamshell bucket, adapter system S-Lock (S60)

Other adapter systems on request.

Multi-Grip

Type	Width (mm/in)	Opening (mm/in)	Volume (m^2/cords)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
MG16	531 / 20.9	1,822 / 71.7	0.36 / 0.24	474 / 1,043	8,000 / 17,600	12 - 18 / 26,400 - 39,600

Package consists of: Multi-Grip, adapter system S-Lock (S60)

Other adapter systems on request.

Fork tines

Type	Tine adjustment	Load capacity max. (kg/lbs)	Tine length (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
PF12M-120	mechanical	2,500 / 98.4	1,200 / 47.2	220 / 484	<12 / <26,400
PF12H-120	hydraulically	2,500 / 98.4	1,200 / 47.2	240 / 528	<12 / <26,400

Package consists of: fork tines, frame with adapter system S-Lock (S60)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

TILTROTATOR TR19NOX

Type	Breakout force max. (ISO) (kN/lbf)	Tilt angle (°)	Tilt constant (kNm/ft.lbs)	Rotation torque (kNm/ft.lbs)	Weight (from kg/lbs)	Operating weight (t/lbs)
TR19NOX	150 / 33,000	2 x 50°	40.5 / 29,869	12 / 8,850	580 / 1,276	14 - 19 / 30,800 - 41,800

Standard package: TR19NOX, upper bracket direct mount, quick coupler system S-Lock, NOX-Control DF10

Other adapter, quick coupler & control systems on request.

Transport pallet NOX

Type	Width (mm/in)	Length (mm/in)	Weight (from kg/lbs) depending on adapter
NOX Cargo	800 / 31.5	1,200 / 47.2	100 / 220

Package consists of: transport pallet with adapter

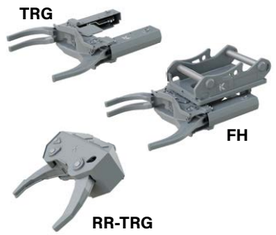
Please specify the quick coupler type.

Gripper module

Type	Opening (mm/in)	Closing force (kN/lbf)	Load capacity (kg/lbs)	Weight (from kg/lbs)
TRG19	734 / 28.8	18.5 / 4,070	900 / 1,980	127 / 279
F19H	734 / 28.8	18.5 / 4,070	900 / 1,980	165 / 363
RR-TRG19	822 / 32.3	30.1 / 6,622	5,000 / 11,000	170 / 374

Package consists of: gripper / gripper with integrated adapter

Other adapter systems on request.

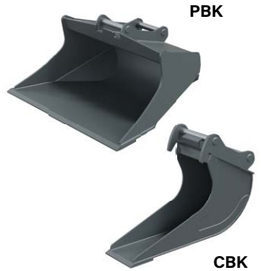


Profile buckets

Type	Bucket types	Adapter	Width (mm/in)	Volume (m³/ft³)	Weight (kg/lbs)
PBK19-170-S60	grading bucket	S60	1,700 / 66.9	0.9 / 31.7	660 / 1,452
CBK19-040-OQ65	cable bucket	OQ65	400 / 15.7	0.34 / 12	350 / 770
CBK19-040-OQ70/55	cable bucket	OQ70/55	400 / 15.7	0.34 / 12	360 / 792

Package consists of: grading bucket / cable bucket, adapter

Other bucket types, widths, volumes or adapters on request.



Levelling bars with roller

Type	Width (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
AVB 24-2500	2,500 / 98.4	420 / 924	<24 / <52,800
AVB 24-2700	2,700 / 106.3	470 / 1,034	<24 / <52,800

Package consists of: levelling bar with roller, adapter system S-Lock (S60)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

Attachments for NOX Tiltrotators — TR19NOX

Demolition and sorting grabs

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
D19TR-60	600 / 23.6	1,550 / 61	225 / 0.29	450 / 990	4,000 / 8,800	14 - 19 / 30,800 - 41,800
D19TR-80	800 / 31.5	1,550 / 61	300 / 0.39	500 / 1,100	4,000 / 8,800	14 - 19 / 30,800 - 41,800

Package consists of: demolition and sorting grab, adapter system S-Lock (S60)

Other adapter systems on request.

Multi purpose grabs

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
A19TR-60	600 / 23.6	1,900 / 74.8	300 / 0.39	570 / 1,254	4,000 / 8,800	14 - 19 / 30,800 - 41,800

Package consists of: multi purpose grab, adapter system S-Lock (S60)

Other adapter systems on request.

Clamshell bucket

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
C19TR-60	600 / 23.6	1,655 / 65.1	245 / 0.32	575 / 1,265	4,500 / 9,900	14 - 19 / 30,800 - 41,800

Package consists of: clamshell bucket, adapter system S-Lock (S60)

Other adapter systems on request.

Multi-Grip

Type	Width (mm/in)	Opening (mm/in)	Volume (m²/cords)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
MG16	531 / 20.9	1,822 / 71.7	0.36 / 0.24	474 / 1,043	8,000 / 17,600	12 - 18 / 26,400 - 39,600
MG20	531 / 20.9	2,279 / 89.7	0.52 / 0.34	560 / 1,232	10,000 / 22,000	16 - 22 / 35,200 - 48,400

Package consists of: Multi-Grip, adapter system S-Lock (S60)

Other adapter systems on request.

Fork tines

Type	Tine adjustment	Load capacity max. (kg/lbs)	Tine length (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
PF18M-120	mechanical	4,000 / 8,800	1,200 / 47.2	320 / 704	<18 / <39,600
PF18H-120	hydraulically	4,000 / 8,800	1,200 / 47.2	345 / 759	<18 / <39,600

Package consists of: fork tines, frame with adapter system S-Lock (S60)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

TILTROTATOR TR25NOX

Type	Breakout force max. (ISO) (kN/lbf)	Tilt angle (°)	Tilt constant (kNm/ft.lbs)	Rotation torque (kNm/ft.lbs)	Weight (from kg/lbs)	Operating weight (t/lbs)
TR25NOX	170 / 37,400	2 x 50°	51.7 / 38,129	15 / 11,063	860 / 1,892	19 - 25 / 41,800 - 55,000

Standard package: TR25NOX, upper bracket direct mount, quick coupler system S-Lock, NOX-Control DF10

Other adapter, quick coupler & control systems on request.

Transport pallet NOX

Type	Width (mm/in)	Length (mm/in)	Weight (from kg/lbs) depending on adapter
NOX Cargo	800 / 31.5	1,200 / 47.2	100 / 220

Package consists of: transport pallet with adapter

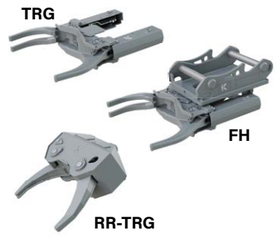
Please specify the quick coupler type.

Gripper module

Type	Opening (mm/in)	Closing force (kN/lbf)	Load capacity (kg/lbs)	Weight (from kg/lbs)
TRG25	1,137 / 44.7	19.5 / 4,290	1,300 / 51.1	224 / 493
F25H	1,137 / 44.7	19.5 / 4,290	1,300 / 51.1	265 / 583
RR-TRG25	822 / 32.3	30.1 / 6,622	5,000 / 196.8	187 / 411

Package consists of: gripper / gripper with integrated adapter

Other adapter systems on request.



Profile buckets

Type	Bucket types	Adapter	Width (mm/in)	Volume (m³/ft³)	Weight (kg/lbs)
PBK23-180-S70	grading bucket	S70	1,800 / 70.8	1.15 / 40.6	830 / 1,826
PBK28-200-S70	grading bucket	S70	2,000 / 78.7	1.8 / 63.5	1,160 / 2,552
CBK23-060-OQ70/55	cable bucket	OQ70/55	600 / 23.6	0.4 / 14.1	375 / 825
CBK28-060-OQ70/55	cable bucket	OQ70/55	600 / 23.6	0.5 / 17.6	500 / 1,100

Package consists of: grading bucket / cable bucket, adapter

Other bucket types, widths, volumes or adapters on request.

Levelling bars with roller

Type	Width (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
AVB 24-2500	2,500 / 98.4	420 / 924	<24 / <52,800
AVB 24-2700	2,700 / 106.2	470 / 1,034	<24 / <52,800

Package consists of: levelling bar with roller, adapter system S-Lock (S70)

Other adapter systems on request.

Note: Other attachments and adapters from other manufacturers on request

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Attachments for NOX Tiltrotators — TR25NOX

Demolition and sorting grabs

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
D25TR-84	840 / 33	1,890 / 74.4	380 / 0.49	725 / 1,595	5,000 / 11,000	18 - 25 / 39,600 - 55,000
D25TR-100	1,000 / 39.3	1,890 / 74.4	450 / 0.58	770 / 1,694	5,000 / 11,000	18 - 25 / 39,600 - 55,000

Package consists of: demolition and sorting grab, adapter system S-Lock (S70)

Other adapter systems on request.

Multi purpose grabs

Type	Width (mm/in)	Opening (mm/in)	Volume (liter/c.y.)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
A25TR-70	700 - 27.5	2,038 / 80.2	400 / 0.52	815 / 1.793	5,000 / 11,000	18 - 25 / 39,600 - 55,000

Package consists of: multi purpose grab, adapter system S-Lock (S70)

Other adapter systems on request.

Multi-Grip

Type	Width (mm/in)	Opening (mm/in)	Volume (m²/cords)	Weight (kg/lbs)	Load capacity (kg/lbs)	Operating weight (t/lbs)
MG20	531 / 20.9	2,279 / 89.7	0.52 / 0.34	560 / 1,232	10,000 / 22,000	16 - 22 / 35,200 - 48,400

Package consists of: Multi-Grip, adapter system S-Lock (S70)

Other adapter systems on request.

Fork tines

Type	Tine adjustment	Load capacity max. (kg/lbs)	Tine length (mm/in)	Weight (kg/lbs)	Operating weight (t/lbs)
PF24M-120	mechanical	5,000 / 11,000	1,200 / 47.2	410 / 902	<24 / <52,800
PF24H-120	hydraulically	5,000 / 11,000	1,200 / 47.2	440 / 968	<24 / <52,800

Package consists of: fork tines, frame with adapter system S-Lock (S70)

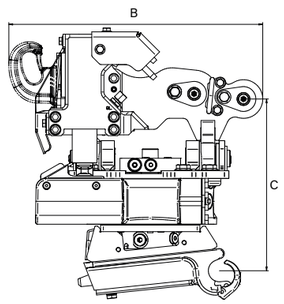
Other adapter systems on request.

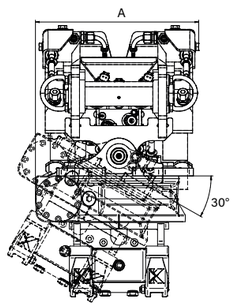
Note: Other attachments and adapters from other manufacturers on request

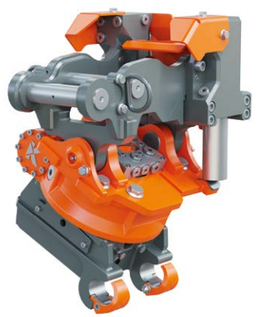
TR025 *Tiltrotator with cylinders*

Tiltrotators are now an indispensable part of any construction site! The new TR025 for mini excavators up to 2.6t/5,720 lbs, with its 360° continuous rotation and a swivel angle of 2 x 30°, is a universal joint that offers a bunch of new application possibilities. With a quick coupler and a selection of attachments, this means maximum efficiency on every construction site.

- **Greater safety** as manual labor is reduced to a minimum.
- **Long service** life thanks to robust design.
- **High-flow swivel**.
- **High tilt and holding torque**.
- **No protruding parts:** without swinging cylinders.
- **Low maintenance**: worm drive lubricated permanently (oil bath).
- **Upper suspension:** direct mount.
- **Lower quick coupler:** different systems available.
- **Optional load hook**.
- **Hose connections:** directly at tilt cylinders.







Drawing: TR025 Tiltrotator, KHS01L quick coupler, optional load hook

	TR025
Operating weight	0.9 - 2.6 t / 1,980 - 5,720 lbs
Weight* (from)	83 kg / 183 lbs
Width A* (from)	286 mm / 11.2 in
Length B* (from)	412 mm / 16.2 in
Height C* (from)	300 mm / 11.8 in
Recomm. bucket width max.	1,000 mm / 39.3 in
Breakout force max. (ISO)	28 kN / 6,160 lbf
Breakout torque max.	20 kNm / 14,750 ft.lbs
Tilt angle	2 x 30°
Tilt torque	3.8 kNm @ 21 MPa / 2,803 ft.lbs @ 3,024 psi
Rotation speed	8.5 per min @ 6.5 l/min / 1.7 GPM
Rotation torque	1,000 Nm / 738 ft.lbs
Hydraulic pressure max.	21 MPa / 3,024 psi
Recomm. pump capacity DF04/06/08 (tilt/rotate)	5/16 l/min / 1.3/4.2 GPM
Electric swivel	optional

*Specifications depend on the machine configuration (upper bracket and lower quick coupler)

Standard package: tiltrotator, electrical control system (depending on version), upper bracket, lower quick coupler

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