

# TR10NOX

# Tiltrotator

Experience and innovation have led to one of the most advanced tools for excavators – the **NOX Tiltrotator**: continuous 360° rotation and a tilting angle of 2 x 55° make it a universal joint. Combined with quick change system and various attachments this means highest efficiency at any construction site. The **NOX Tiltrotator** range is optimally engineered to suit excavators with an operating weight from 5t / 11000 lbs to 10t / 22000 lbs.



**Advantages:**

- **Precision and safety** due to „smooth“ proportional control (optional).
- **High stability and long service life** thanks to special cast housing.
- **Low overall height** thanks to elliptic rotary actuator: large travel.
- **High and constant tilt force** due to cylinderless rotary actuator.
- **No protruding parts:** excavation with narrow bucket possible in small, deep canals, even under or in between existing tubes.
- **Low maintenance:** worm drive lubricated permanently (grease).

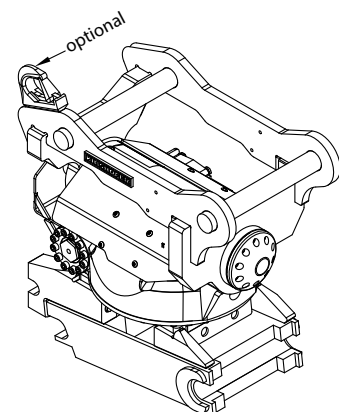
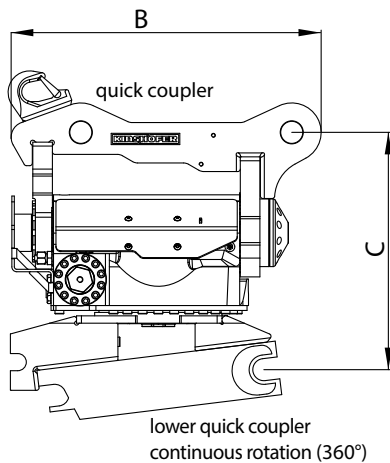
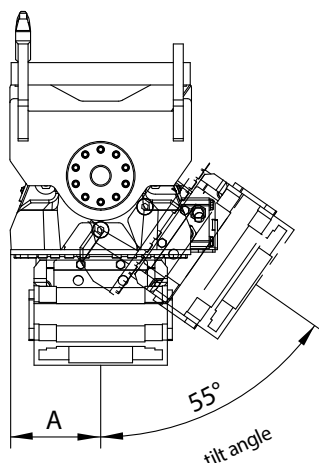
Tiltrotator Type	TR10NOX				
	unit	DF10	DF8	DF4	CSP
<b>Machine size</b>	t/lbs	5 - 10 / 11000 - 22000			
<b>Breaking force max. (ISO)</b>	kN/lbf	70 / 15400			
<b>Bucket width max.</b>	mm/in	1600 / 63			
<b>Weight (from) <sup>1)</sup></b>	kg/lbs	220 / 484			
<b>Width A <sup>1)</sup></b>	mm/in	205 / 8.1			
<b>Length B <sup>1)</sup></b>	mm/in	610 / 24			
<b>Height C <sup>1)</sup></b>	mm/in	445 / 17.5			
<b>Tilt angle</b>	°	2 x 55			
<b>Tilt torque</b>	Nm/ft.lbs	10500 / 7744			
<b>Rotation speed</b>	1/min	7,5 at 40 l/min / 10.6 GPM			
<b>Rotation torque</b>	Nm/ft.lbs	6500 / 4794 constant at 360° continuous			
<b>Oil flow extra function 1/2 max.</b>	l/min / GPM	40/70 / 10.6/18.5	70 / 18.5	40 / 10.6	40 / 10.6
<b>Hydraulic pressure max.</b>	MPa/psi	rotation: 20 / 2880 tilt: 25 / 3600	rotation: 20 / 2880 tilt: 25 / 3600	rotation: 20 / 2880 tilt: 25 / 3600	25 / 3600
<b>Recommended pressure in return line</b>	MPa/psi	1			
<b>Number of swivel channels extra function</b>	number	4	2	2	2
<b>Number of swivel channels quick coupler</b>	number	2			

<sup>1)</sup> reference: TR10NOX S45/S45

Control	
Type	Description
<b>CSP <sup>2)</sup></b>	SVAB RT controller, tilt and rotation are controlled by proportional solenoid valves and can be run simultaneously, extra function and quick coupler are controlled by on/off valves
<b>SVAB <sup>2)</sup></b>	NOXPROP controller, tilt, rotation and extra function are controlled by proportional solenoid valves and can be run simultaneously, quick coupler is controlled by on/off valves, separate display module, easy and fast installation
<b>NOXPROP <sup>2)</sup></b>	- tilt function, extra 1 (extra 2 as an option) and quick coupler are controlled by changing over between the functions of circuit 1 - rotation function is controlled by circuit 2
<b>DF4 <sup>3)</sup>*</b>	for each function (rotate, tilt, quick change, extra 1) separate double acting hydraulic circuit on excavator dipper
<b>DF8 <sup>4)</sup></b>	for each function (rotate, tilt, quick change, extra 1, extra 2) separate double acting hydraulic circuit on excavator dipper
<b>DF10 <sup>4)</sup></b>	

\* two hydraulic circuits needed; <sup>2)</sup> installation of **KINSHOFER** comfort control <sup>3)</sup> installation of control; original joysticks remain <sup>4)</sup> original excavator control remains

**Control System CSP consists of:** controlbox, 2 joystick grips, wiring from joysticks to Tiltrotator, proportional pressure control valve, display



total height depending on mounted adapters

# Attachments / Sets / Mounting Options

# TR10NOX

Especially adapted to the TR10NOX, there are different attachments and sets available.

Below you will find a set of the most common buckets used on the TR10NOX as well as the different available mounting options.

In combination with the **NOX** Tiltrotator, a large variety of possibilities is provided to make your carrier machine work more efficiently - in more than 3 dimensions ...

Find different tool examples on the last pages.

For more possible tool combinations, please see our catalogs

- ① CONSTRUCTION - GENERAL CONSTRUCTION
- ② CONSTRUCTION - LANDSCAPING & SNOW REMOVAL

### Gripper

- Always mounted to the tiltrotator, no dismantling necessary when working with other attachments.
- For handling posts, tubes, pallets, rocks, sewer cover, etc.
- Available for S45 / S50 or KMS08 / KHS08 lower quick coupler (others on request).



### Bucket Set includes

- SKP Grading Bucket cleans up and shapes sites.
- SKD Backhoe Bucket for trenching.
- SKK Trench Bucket for narrow cable channels.

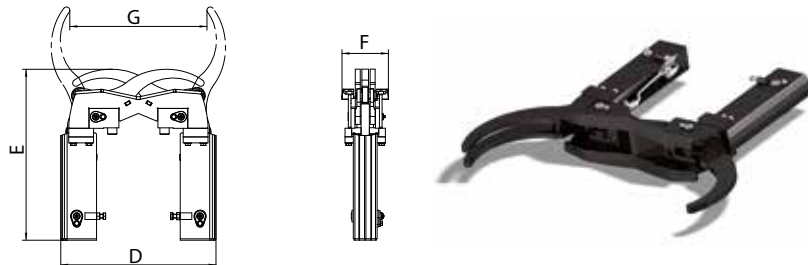


### Gripper

Type	Lower quick coupler	Self weight (approx. kg/lbs)	Dimensions D x E x F (mm/in)	max. Opening width G (mm/in)	Closing time <sup>1)</sup> (sec.)	Closing force (kN/lbf)	Load capacity (kg/lbs)
TRG10	S45/50	80 / 176	600 x 675 x 205 / 23.62 x 26.57 x 8.07	615 / 24.21	1.3	10 / 2200	500 / 1100
TRG10	KSW08	80 / 176	600 x 675 x 205 / 23.62 x 26.57 x 8.07	615 / 24.21	1.3	10 / 2200	500 / 1100

<sup>1)</sup> at 25 l/min. / 6.61 GPM

### Technical Drawing



### Bucket Set incl. SKP 12 / SKD 10 / SKK 12

Type	Self weight (approx. kg/lbs)	Width (mm/in)	Volume (litre/c.y.)	with Quick change adapter
SKP 12 Grading Bucket	210 / 462	1500 / 59.06	500 / 0.65	S45
SKD 10 Backhoe Bucket (incl. teeth)	210 / 462	800 / 31.50	450 / 0.59	S45
SKK 12 Trench Bucket	120 / 264	400 / 15.75	275 / 0.36	S45

### Tiltrotator TR10NOX Mounting Options

Type	Upper bracket	Lower quick coupler
S-Coupler S-Lock	direct mount or S45/S50	S45/S50
Oilquick	direct mount or OQ45	OQ45
Hydrema	direct mount or Hydrema	Hydrema
Kinshofer L-Lock	direct mount or KSW08	KMS08
Kinshofer L-Lock	direct mount or KSW08	KHS08
Kinshofer X-Lock	direct mount or CMX	CMX
Verachttert	direct mount or CW10	CW10
Martin	direct mount or MH10	MH10