TR06NOX / TR10NOX / TR18NOX — Tilt Rotators

Experience and innovation have led to one of the most advanced tools for excavators – the NOX Tilt Rotator: continuous 360° rotation and a tilting angle of 2 x 50° make it a universal joint. Combined with quick change system and various attachments this means highest efficiency at any construction site.

The NOX Tilt Rotator range is optimally engineered to suit excavators with an operating weight from 3t to 18t.

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 in small, deep canals, even under or in between existing tubes.
- **Low maintenance**: worm drive runs in permanent greasing.

Tilt Rotator TR06NOX / TR10NOX / TR18NOX with 360° rotation

Type	Excavator operating weight (t)	Self weight[1] (ca. kg)	Width A[2] (mm)	Length B[2] (mm)	Height C[2] (mm)	max. Volume bucket (m^3)	max. Width bucket (mm)	Tilting angle (°)	Tilting torque[3] (kNm)	Rotating torque[4] (Nm)	Rotations / min (RPM)	Rotary feedthrough (l/min)
TR06NOX	> 3 - 6	120	360	500	370	0,25	1200	2 x 50	8,5 constant	7500	9,0[5]	40
TR10NOX	> 5 - 10	220	412	610	445	0,5	1600	2 x 50	12 constant	7500	7,5[5]	40 [70[7]]
TR18NOX	> 9 - 18	460	450	740	530	1,0	2000	2 x 50	25 constant	8400	7,0[6]	120

[1] total weight incl. upper suspension, excl. quick change [2] reference: TR06NOX S40/S40, TR10NOX S50/S50, TR18NOX S60/S60 [3] at 25 MPa [4] at 22,5 MPa and vertical axis
[5] CSP & CSS at 30 l/min [6] CSP & CSS at 40 l/min [7] for DF8 and DF10 control

Standard package consists of: tilt rotator, electric control system, upper suspension or coupling, lower coupler or quick change

Control

Type	Description
CSS [8]	all functions are controlled by on/off solenoid valves and can be run simultaneously
CSP [9]	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
DF4 [8]	for each function (rotate & tilt) separate double acting hydraulic circuit on excavator dipper (not upgradable)
DF8 [8]	for each function (rotate, tilt, quick change, Extra 1) separate double acting hydraulic circuit on excavator dipper
DF10 [8]	for each function (rotate, tilt, quick change, Extra 1, Extra 2) separate double acting hydraulic circuit on excavator dipper

[8] original excavator control remains [9] installation of KINSHOFER comfort control

Control System CSS consists of: controlbox, wiring from existing control sticks to tilt rotator
Control System CSP consists of: controlbox, 2 joystick grips SVAB L8, wiring from joysticks to tilt rotator, proportional pressure control valve

Accessories

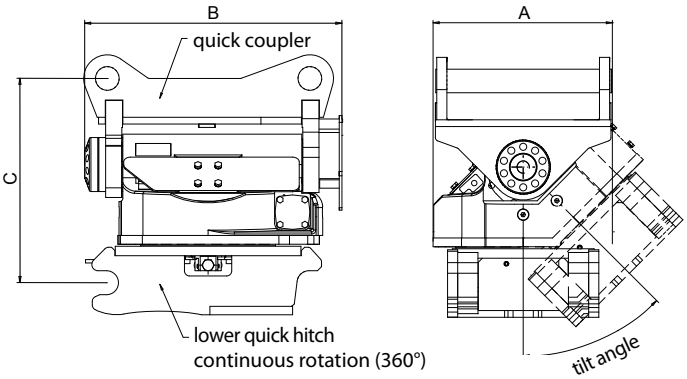
Gripper Type	Description	Self weight (approx. kg)	Dimensions D x E x F[10] (mm)	max. Opening width G (mm)	Closing time[11] (sec.)	Closing force (kN)	Load capacity (kg)
TRG06 S40	hydraulic Gripper Module, rigidly mounted to the NOX, can be used to pose masts, tubes etc. without the necessity of changing an attachment	40	470 x 515 x 140	415	1,5	7,5	300
TRG10 S45/50		80	600 x 675 x 205	610	1,3	10	500
TRG18 S60		113	700 x 715 x 265	713	1,7	18	900

[10] see techn. drawing [11] at 25 l/min.

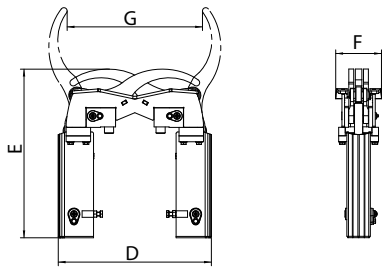
Requirements of Excavator

Hydraulic system:	Minimum of one single acting hydraulic circuit (hammer valve with free return line to tank) Double acting hydraulic circuit equally possible for DF8 and DF10 models (not CSP/CSS)
Operating pressure:	**25 MPa (250 bar); max. backflow pressure 0,5 MPa (5 bar)**
Electrics (for CSS and CSP)**:**	Electric supply 12V or 24 V

Technical Drawings



Tilt Rotator TR18 S60 S60



Gripper TRG06