

X04

Tiltrotator 2-4 tonnes



A tiltrotator optimized for compact excavators between 2 and 4 tonnes

Steelwrist small tiltrotators are developed with a focus on flexibility, building height and low weight, that is so important for compact excavators. With a steel cast structure, the weight can be reduced, while strength is maximized.

Take on a variety of tasks with a tiltrotator on your compact excavator

Compact excavators are often used in different construction projects like landscaping, material handling, stump removal or light demolition. With the tiltrotator you increase the ability to reach tight spaces, and save time and reduce wear on both machine and surroundings as the need for machine movements at the worksite is minimized. The tiltrotator is exceptionally useful when digging trenches and for sewer lines in utility work, and in combination with a grapple you have a versatile setup for removing debris, or placing and removing trees.

A compact excavator with a tiltrotator is a good choice for construction work at busy and confined sites in the city, with workers and citizens on the move nearby. The tiltrotator brings more manoeuvrability in a sensitive area, while delivering excellent earthmoving capacities and efficiency for the excavator. A Direct Fit configuration is often chosen for compact excavators, where the tiltrotator is permanently mounted to the dipper arm.

Steelwrist quick couplers and tiltrotators follow the symmetrical standard (S-standard), the fastest growing coupler type internationally. The attachment coupler on the tiltrotator has Front Pin Hook (FPH), for safe work tool changes. The tiltrotator is delivered with a control system that fits your excavator regardless if you need a two or four hose solution.

Control system

Steelwrist supply two types of tiltrotator control systems. Quantum is an advanced control system where ergonomics, easy installation and fuel efficiency, remote support and automatic tool recognition are important parts of the system. The four hose proportional machine control is the more basic system.

Gripper cassette (option)

Equip the tiltrotator with a gripper cassette with a finger gripper that will make your excavator even more flexible, handling objects with precision. The gripper cassette can be retrofitted.

Central lubrication (option)

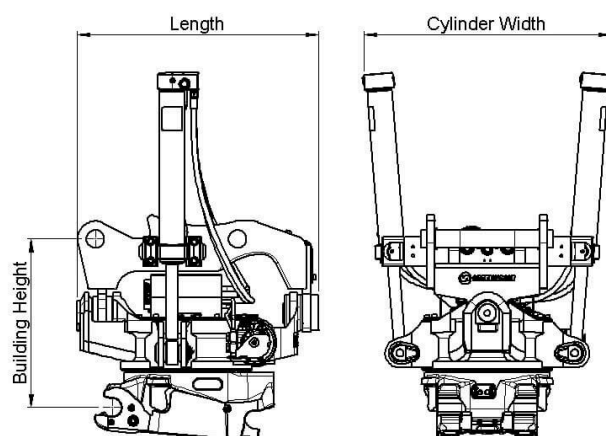
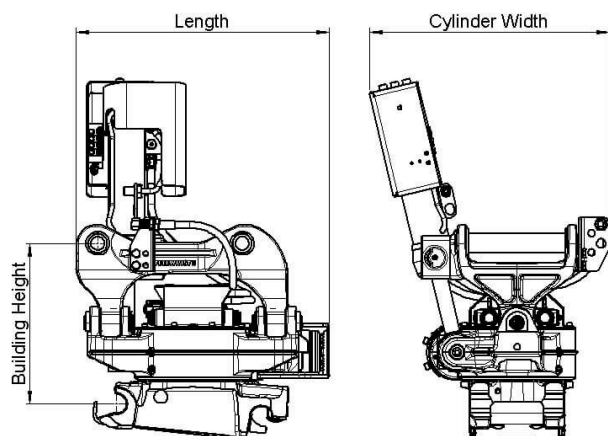
Our tiltrotators can be equipped directly from factory with central lubrication that fits all central lubrication systems on the market.

*The X04 tiltrotator is also available with Verachtert (CW) coupler interface.
For Verachtert (CW) the tiltrotator always has a Direct fit configuration.*

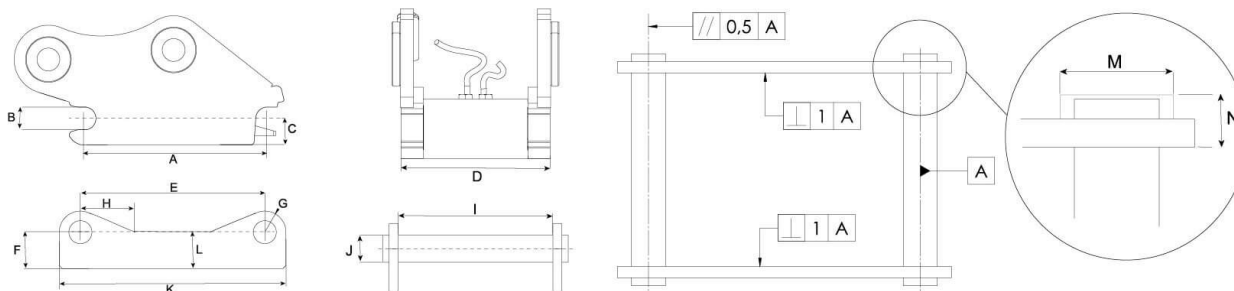


Technical specification

Tiltrotator	X04	X04		
Machine Interface	S40	DF		
Tiltrotator Quick Coupler	S40	S40		
Machine weight [ton]	2-4	2-4		
Max Breakout torque [kNm]	35	35		
Weight from [kg]	120	120		
Gripper weight [kg]	45	45		
Building height [mm]	343	324		
Length [mm]	523	570		
Cylinder width [mm]	499	437		
Max tilt angle [degrees]	±45	±45		
Max width dipper arm [mm]	–	142		
Pin diameter [mm]	–	35-45		
Pin distance [cc-measure] [mm]	–	130-240		
Tilt Torque [kNm]	10,6	10,6		
Rotational Torque [kNm]	3,9	3,9		
Hydraulic AUX with gripper	1	1		
Hydraulic AUX without gripper	1	1		
Lifting hook [ton]	–	1		
Oil Flow [l/min]	28	28		
Max pressure [bar]	210	210		
Max Pressure Separate AUX [bar]	–	–		
Safety solution	FPH	FPH		



Symmetrical Quick Couplers for Excavators (S-standard)



Dimensions and tolerance table

Measurements (mm)	\$30 /150	\$30 /180	\$40	\$40 /240	\$45	\$50	\$60	\$70	\$80	\$90 /220	\$90 /750	\$100	\$120
A -Tolerance	199.8 ±0.2	229.8 ±0.2	299.8 ±0.2	299.8 ±0.2	429.8 ±0.2	429.8 ±0.2	479.8 ±0.2	599.8 ±0.2	669.8 ±0.2	749.8 ±0.2	749.8 ±0.2	899.8 ±0.2	924.8 ±0.2
B -Tolerance	30 Max 40 Min	30 Max 40 Min	30 Max 40 Min	40 Max 40 Min	45 Max 45 Min	50 Max 50 Min	60 Max 60 Min	70 Max 70 Min	80 Max 80 Min	90 Max 90 Min	90 Max 90 Min	100 Max 100 Min	120 Max 120 Min
C -Tolerance	40 Max 40 Min	45 Max 50 Min	50 Max 50 Min	65 Max 65 Min	65 Max 65 Min	65 Max 65 Min	100 Max 100 Min	100 Max 100 Min	115 Max 125 Min	125 Max 125 Min	140 Max 150 Min	150 Max 160 Min	200 Max 200 Min
D -Tolerance	148 ±1	178 ±1	238 ±1	238 ±1	288 ±1	268 ±1	338 ±1	448 ±1	588 ±1	618 ±1	748 ±1	748 ±1	868 ±1
E -Tolerance	200.5 ±0.5	230.5 ±0.5	300.5 ±0.5	300.5 ±0.5	430.5 ±0.5	430.5 ±0.5	480.5 ±0.5	600.5 ±0.5	670.5 ±0.5	750.5 ±0.5	750.5 ±0.5	900.5 ±0.5	925.5 ±0.5
F -Tolerance	45 Min 45 Max	50 Min 50 Max	55 Min 55 Max	55 Min 55 Max	70 Min 70 Max	70 Min 70 Max	85 Min 85 Max	115 Min 115 Max	135 Min 135 Max	155 Min 155 Max	155 Min 155 Max	175 Min 175 Max	240 Min 240 Max
G -Tolerance	30 Max 30 Min	30 Max 30 Min	40 Max 40 Min	40 Max 40 Min	45 Max 45 Min	45 Max 45 Min	60 Max 60 Min	75 Max 75 Min	90 Max 90 Min	110 Max 110 Min	110 Max 110 Min	125 Max 125 Min	145 Max 145 Min
H -Tolerance	85 Max 85 Min	100 Max 100 Min	100 Max 100 Min	100 Max 100 Min	125 Max 125 Min	125 Max 125 Min	150 Max 150 Min	250 Max 250 Min	250 Max 250 Min	250 Max 250 Min	250 Max 250 Min	250 Max 250 Min	275 Max 275 Min
I -Tolerance	152 ±1	182 ±1	202 ±1	242 ±1	292 ±1	272 ±1	342 ±1	452 ±1	592 ±1	622 ±1	752 ±1	752 ±1	872 ±1
J -Tolerance	30 Max 30 Min	40 Max 40 Min	40 Max 40 Min	40 Max 40 Min	45 Max 45 Min	50 Max 50 Min	60 Max 60 Min	70 Max 70 Min	80 Max 80 Min	90 Max 90 Min	90 Max 90 Min	100 Max 100 Min	120 Max 120 Min
K -Tolerance	290 Max 290 Min	380 Max 380 Min	380 Max 380 Min	380 Max 380 Min	520 Max 520 Min	520 Max 520 Min	620 Max 620 Min	740 Max 740 Min	830 Max 830 Min	1000 Max 1000 Min	1000 Max 1000 Min	1150 Max 1150 Min	1250 Max 1250 Min
L -Tolerance	45 Max 45 Min	50 Max 50 Min	55 Max 55 Min	55 Max 55 Min	70 Max 70 Min	70 Max 70 Min	85 Max 85 Min	115 Max 115 Min	135 Max 135 Min	200 Max 200 Min	200 Max 200 Min	250 Max 250 Min	300 Max 300 Min
M -Tolerance	62 Max 62 Min	62 Max 62 Min	72 Max 72 Min	72 Max 72 Min	77 Max 77 Min	77 Max 77 Min	92 Max 92 Min	102 Max 102 Min	122 Max 122 Min	132 Max 132 Min	132 Max 132 Min	142 Max 142 Min	162 Max 162 Min
N -Tolerance	25 Max 25 Min	25 Max 25 Min	28 Max 28 Min	28 Max 28 Min	30 Max 30 Min	30 Max 30 Min	35 Max 35 Min	40 Max 40 Min	55 Max 55 Min	70 Max 70 Min	70 Max 70 Min	75 Max 75 Min	80 Max 80 Min

Load table

Quick Coupler Size	Width (mm)	Shaft c-c (mm)	Shaft diameter (mm)	Minimum Positive Torque (kNm)	Minimum Negative Torque (kNm)	Max recommended machine weight (ton)
S30/150	150	200	30	28	20	2
S30/180	180	230	30	28	20	2
S40	200	300	40	35	23	6
S40/240	240	300	40	40	26	7
S45	290	430	45	65	42	11
S50	270	430	50	65	42	11
S60	340	480	60	150	75	18
S70	450	600	70	300	195	30
S80	590	670	80	600	390	40
S90/620	620	750	90	1000	650	70
S90/750	750	750	90	1000	650	70
S100	750	900	100	1200	775	85
S120	925	870	120	1600	1000	100

