Cleco®
Production Tools

Homologation

Document no: 014/2022

CellTek™

Cordless Assembly Tools

Type: **Cleco - CTBAW153**

Order no.: **CTBAW153**

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Cleco - CTBAW153

Right Angle Tool

Order no.: CTBAW153

Machine type:	Cordless Assembly Tools
Torque range:	3,6 Nm to 15 Nm
Max speed:	1025 rpm
Certified serial nos.:	1019840, 1019841, 1019131

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Machine capability study and graphs
Measurement capability test

Apex Tool Group

Cordless Assembly Tools

C_m / C_{mk} values achieved

According VDI/VDE 2647 February 2013

Accuracy class: 7 %

Tool model	Serial nos.	Test data	30 %		80 %		100 %	
			30° ±5°	360° ±15°	30° ±5°	360° ±15°	30° ±5°	360° ±15°
CTBAW153		Break time	5 s	7 s	5 s	35 s	5 s	60 s
		Test torque	**7,02 Nm**		**12,72 Nm**		**15,00 Nm**	
		Speed in 1st stage	1000 rpm	1000 rpm	1000 rpm	1000 rpm	1000 rpm	1000 rpm
		Speed in last stage	50 rpm	50 rpm	50 rpm	50 rpm	50 rpm	50 rpm
		Angle start torque	3,51 Nm		6,36 Nm		7,50 Nm	
	1019840	C_m	3,59	3,79	3,81	4,04	6,53	4,64
		C_{mk}	2,95	2,15	3,23	2,37	5,99	2,62
	1019841	C_m	2,99	3,12	3,17	3,82	4,54	3,68
		C_{mk}	2,09	2,37	2,56	2,70	4,26	2,49
	1019131	C_m	2,94	4,69	3,41	4,45	5,07	4,13
		C_{mk}	2,63	3,61	2,92	3,88	4,29	3,47
Min. C_m/C_{mk}		C_m	2,94	3,12	3,17	3,82	4,54	3,68
		C_{mk}	2,09	2,15	2,56	2,37	4,26	2,49

	Target:	≥ 1.67	**Rating**
Capability index	**C_m**	**2,94**	**OK**
	C_{mk}	**2,09**	**OK**

Tolerances of rotational angle homologation
Measurements without angle correction

Tool model	Serial nos.	Test data	60 % of max. torque		80 % of max. torque	
			40°		**180°**	
CTBAW153		Break time	5 s		10 s	
		Angle start torque	3,00 Nm		3,00 Nm	
		Test torque	9,00 Nm		12,00 Nm	
		Speed in 1st stage	300 rpm		300 rpm	
		Speed in last stage	50 rpm		50 rpm	
	1019840	Torque	±	3,08 %	±	2,92 %
		Angle	±	0,9°	±	4,3°
	1019841	Torque	±	2,90 %	±	2,91 %
		Angle	±	1,8°	±	3,8°
	1019131	Torque	±	3,32 %	±	3,05 %
		Angle	±	1,1°	±	6,5°

Torque	Target: ±	7 %	Target: ±	7 %
	Actual: ±	3,32 %	Actual: ±	3,05 %
Rating	**OK**		**OK**	
Angle	Target: ±	5°	Target: ±	10°
	Actual: ±	1,8°	Actual: ±	6,5°
Rating	**OK**		**OK**	

Apex Tool Group

Cordless Assembly Tools

Tolerances of rotational angle homologation

Measurements with angle correction

Tool model	Serial nos.	Test data	60 % of max. torque	80 % of max. torque
			40°	**180°**
CTBAW153		Break time	5 s	10 s
		Angle start torque	3,00 Nm	3,00 Nm
		Test torque	9,00 Nm	12,00 Nm
		Speed in 1st stage	300 rpm	300 rpm
		Speed in last stage	50 rpm	50 rpm
	1019840	Torque	± 3,73 %	± 2,87 %
		Angle	± 1,5°	± 5,5°
	1019841	Torque	± 2,90 %	± 3,22 %
		Angle	± 1,6°	± 4,1°
	1019131	Torque	± 2,30 %	± 2,70 %
		Angle	± 1,5°	± 6,8°

Torque	Target: ± 7,00 %	Target: ± 7,00 %
	Actual: ± 3,73 %	Actual: ± 3,22 %
Rating	**OK**	**OK**

Angle	Target: ± 5°	Target: ± 10°
	Actual: ± 1,6°	Actual: ± 6,8°
Rating	**OK**	**OK**

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Test sheet no. 1a

General specifications

Manufacturer:	Apex Tool Group	**Assembly tool type**	Cordless Assembly Tools
Tool model:	CTBAW153	**Serial numbers:**	1019840, 1019841, 1019131
Torque range:	3,6 Nm to 15 Nm		

Rated capacity:		**2000 mAh**	**5000 mAh**
Battery voltage:		18 Volt	
Weight (without battery):		1,45 kg	
Weight (with battery):		1,88 kg	2,18 kg
Maximum speed at the first stage:		1025 rpm	
Maximum speed at the final stage:		1025 rpm	
Minimum speed at the final stage:		0 rpm	
Sound pressure level at maximum speed: (acc. to DIN EN 62841-1:2016-07, DIN EN 62841-2-2:2015-05)		63,0 dB(A)	
Number of duty cycles with a battery at 100% torque	Soft joint (L):	100 runs	310 runs
	Hard joint (H):	470 runs	1270 runs
Temperature of electrical tools: (After 100 measurements with soft joint at 80% torque)		start / end	
	at the output drive:	25 °C / 37 °C	
	on the electric motor:	25 °C / 47 °C	
	on the handle:	25 °C / 47 °C	
Output type:		Square drive	
Output drive size:		3/8 inches	

Test sheet no. 1b

Specifications of controller

Manufacturer:	Apex Tool Group	**Serial number:**	AXABH0001
Controller type:	MPRO400GCD-P	**Software version:**	S168813-1.12.0.61436-Test 03.03.21

Fastening Strategy:	Current shut-off:	Yes
	Torque control:	Yes
	Torque control, angle monitoring:	Yes
	Angle control, torque monitoring:	Yes
	Yield point control:	Yes
	Pre-load control:	No
Options:	Prevailing torque:	Yes
	Angle correction:	Yes
	Pulsing:	No
	Tighten - loosen - tighten:	Yes
	Tapping screw monitoring:	Yes
	Left-hand rundown:	Yes
	Other procedures:	Yes, see documentation
Angle of rotation resolution:		1 degree
Torque accuracy:		1 %
Programming:	Keyboard:	Yes
	External PC:	Yes
	Text display:	Yes
	Display:	Yes
	LCD display:	No
Printer interface:		Yes
Additional inputs and outputs:		2 Serial RS232 8 Digital in, 8 Digital out (24V) 2 Fieldbus modules 3 USB 2.0
Isolation transformer:		No, galvanic isolated power supply
Network:		2 RJ45 10/100 BaseT Ethernet ports

POWER TOOLS SALES & SERVICE CENTERS

Please note that all locations may not service all products.
Contact the nearest Cleco® Sales & Service Center for the appropriate facility to handle your service requirements.

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