

Cleco[®]
Production Tools

Homologation

Document no: 003/2021

CellTek[™]

Cordless Assembly Tools

Type: **Cleco - CTBAW503**

Order no.: **CTBAW503**



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Cleco - CTBAW503

Right Angle Tool

Order no.: CTBAW503



Machine type:	CellTek Tool
Torque range:	13 Nm to 50 Nm
Max speed:	285 rpm
Certified serial nos.:	GC0016, GC0020, GC0023

Contents:	Overview C_m/C_{mk} values General specifications tool and controller Power Tools Sales & Service Centers Machine capability study and graphs Measurement capability test
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C_m / C_{mk} values achieved

Accuracy class: 7 %

CellTek Tool

According VDI/DE 2647 February 2013

Tool	Serial nos.	Test data	30 %		80 %		100 %	
			30° ±5°	360° ±15°	30° ±5°	360° ±15°	30° ±5°	360° ±15°
Cleco-CTBAW503		Break time	5 s	11 s	8 s	33 s	9 s	46 s
		Test torque	24,10 Nm		42,60 Nm		50,00 Nm	
		Speed in 1st stage	285 rpm	285 rpm	285 rpm	285 rpm	285 rpm	285 rpm
		Speed in last stage	50 rpm	50 rpm	50 rpm	50 rpm	50 rpm	50 rpm
		Angle start torque	12,05 Nm		21,30 Nm		25,00 Nm	
	GC0016	C _m	2,91	4,03	3,19	4,55	3,88	5,85
		C _{mk}	2,48	2,52	2,75	3,30	3,38	3,89
	GC0020	C _m	3,65	3,98	3,55	4,94	3,71	7,08
		C _{mk}	3,37	2,67	3,15	3,08	3,40	4,66
	GC0023	C _m	2,76	4,36	3,28	5,03	3,06	5,35
C _{mk}		2,75	3,35	3,12	3,51	2,79	3,48	
Min. C _m /C _{mk}		C _m	2,76	3,98	3,19	4,55	3,06	5,35
		C _{mk}	2,48	2,52	2,75	3,08	2,79	3,48

	Target:	≥ 1.67	Rating
Capability index	C_m	2,76	OK
	C_{mk}	2,48	OK

Tolerances of rotational angle homologation
Measurements with angle correction

Tool	Serial nos.	Test data	60 % of max. torque		80 % of max. torque	
			40°		180°	
Cleco-CTBAW503		Break time	5 s		10 s	
		Angle start torque	10,00 Nm		10,00 Nm	
		Test torque	30,00 Nm		40,00 Nm	
		Speed in 1st stage	285 rpm		285 rpm	
		Speed in last stage	50 rpm		50 rpm	
	GC0016	Torque	±	5,41 %	±	3,51 %
		Angle	±	1,5°	±	3,4°
	GC0020	Torque	±	5,96 %	±	4,95 %
		Angle	±	1,2°	±	3,2°
	GC0023	Torque	±	3,16 %	±	4,32 %
Angle		±	1,4°	±	3,3°	
Torque		Target: ±	7 %	Target: ±	7 %	
		Actual: ±	5,96 %	Actual: ±	4,95 %	
Rating		OK		OK		
Angle		Target: ±	5°	Target: ±	10°	
		Actual: ±	1,5°	Actual: ±	3,4°	
Rating		OK		OK		

Apex Tool Group

Tolerances of rotational angle homologation

CellTek Tool

Measurements without angle correction

Tool	Serial nos.	Test data	60 % of max. torque	80 % of max. torque	
			40°	180°	
Cleco-CTBAW503		Break time	5 s	10 s	
		Angle start torque	10,00 Nm	10,00 Nm	
		Test torque	30,00 Nm	40,00 Nm	
		Speed in 1st stage	285 rpm	285 rpm	
		Speed in last stage	50 rpm	50 rpm	
	GC0016	Torque	± 3,79 %	± 3,62 %	
		Angle	± 1,5°	± 3,4°	
	GC0020	Torque	± 5,19 %	± 4,98 %	
		Angle	± 1,1°	± 3,4°	
	GC0023	Torque	± 3,00 %	± 3,62 %	
		Angle	± 1,2°	± 4,3°	
			Torque	Target: ± 7,00 %	Target: ± 7,00 %
				Actual: ± 5,19 %	Actual: ± 4,98 %
			Rating	OK	OK
		Angle	Target: ± 5°	Target: ± 10°	
			Actual: ± 1,5°	Actual: ± 4,3°	
		Rating	OK	OK	

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Test sheet no. 1a

General specifications

Manufacturer: Apex Tool Group **Assembly tool type:** Electric tool (EC type)
Tool model: Cleco-CTBAW503 **Serial numbers:** GC0016, GC0020, GC0023
Torque range: 13 Nm to 50 Nm

Rated capacity:		2000 mAh	5000 mAh
Battery voltage:		18 Volt	
Weight (without battery):		1,63 kg	
Weight (with battery):		2,06 kg	2,36 kg
Maximum speed at the first stage:		285 rpm	
Maximum speed at the final stage:		285 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):	180 runs	240 runs
	Hard joint (H):	215 runs	715 runs
Temperature of electrical tools: (After 100 measurements with soft joint at 80% torque)		start	end
	at the output drive:	20 °C	33 °C
	on the electric motor:	20 °C	42 °C
	on the handle:	20 °C	37 °C
Output type:	Square drive		
Output drive size:	3/8 "		

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Annex 1

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Test sheet no. 1b

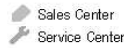
Specifications of controller

Manufacturer: Apex Tool Group **Serial number:** AXABH0001
Tool model: 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 8 Digital in, 8 Digital out 2 Fieldbus modules 3 USB
Isolation transformer:		No, galvanic isolated power supply
Network:		Yes

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Contact the nearest Cleco® Sales & Service Center for the appropriate facility to handle your service requirements.



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