



INDUSTRIAL ASSEMBLY SOLUTIONS



INDUSTRIAL ASSEMBLY
SOLUTIONS

INDUSTRIAL TOOLS

2022





COMPANY
PROFILE

Chu Dai Industrial Co., Ltd. is the leading and first manufacturer of oil-pulse tools in Taiwan . Since its establishment in 1997, Chu Dai has been investing intensive endeavors into providing advanced machinery technology for a better tomorrow. We provide the world with quality oil-pulse torque tools, clutch type tools, Battery tools,grinding tools and torque measuring equipment. Our brand is "TORERO". Our tools are available for automobile industry, home electric appliance , energy, building construction , aviation and shipbuilding industry.

Our factory have intensive R&D and technology to create high precision tools for industry market. We are still continuously developing feature TORERO brand tools for industry market . We have designed and improved a number of patents, especially oil-pulse tools and battery tools enjoy high reputation in the field of manufacturing.

Chu Dai is an ISO-9001 quality control manufacturer. Products are also own CE certificate. Our oil-pulse tools are the best choice of professional tightening tools, automobile assembly factories and production lines. " Integrity , Quality , Innovation , Unceasing improvements , Customer first , Continuous growth" are the very core values and cornerstones where Chu Dai's crew-build up prosperity and pride. Working with us multiplies your performance.

Our business philosophy

"Honest , Innovation, Cooperation and Concern"



THE SPIRIT OF TORERO

Create international brand • Provide customers with honest service • Adhere to concept of precise R&D • Innovate product •Expand market • Cooperate with partners •Sustainable product management • Sincerely concern customers

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Electric Clutch Type Fixed Torsion Tool







- Especially suitable for workstations with operational flexibility and torque range control
- Applicable to work areas where pneumatic and electrical tools cannot be used with air pipes and cable
- Suitable for automotive interior assembly
- Compliance with ISO 5393
- CMK \geq 1.67 at \pm 10%

Display and keys on the rear of the tool for programming functions



- Tightening speed setting
- Tool information inquiry
- Batch count settings
- Light switch settings
- Tightening record inquiry
- Thread speed setting
- Power display

Display light description

-  Low Power
-  The green light is on to indicate that the tightening is OK, and the set torque value is reached; Steady green light accompanied by three beeps, indicating that the normal number of locks has reached the batch countnumber to set the number.
-  The red light is on with three beeps, indicating that the locking is abnormal and the set torque has not been reached. the tightening operation needs to be performed again
-  The traffic lights flash alternately to indicate that the tool is in the reverse state

Pistol type

Model	Torque range Nm	Square drive	Speed r/min	Weight (kg) no battery	length mm	Voltage V	Battery
LTV-40PH-2L	0.8-2.5	1/4	400	1	220	18	Li-ion
LTV-40PH-2	0.8-2.5	1/4	1500	1	220	18	Li-ion
LTV-40PH-6	2.0-6.0	1/4	1000	1	220	18	Li-ion
LTV-40PH-8	3.0-8.0	1/4	800	1	220	18	Li-ion
LTV-40PH-12	5.0-12.0	1/4	600	1	220	18	Li-ion
LTV-40PH-12H	5.0-12.0	1/4	1100	1	220	18	Li-ion

Accessories



Lithium battery (thin)

Model	TLA-18
voltage	18V
capacity	2.5Ah
weight	0.43Kg
order number	3P212600000



Lithium battery (thick)

Model	TLA-18-A
voltage	18V
capacity	5.0Ah
weight	0.68Kg
order number	3P212590000



Charger

Model	TLA-18V
power	AC100V-AC240V
output voltage	18V
weight	0.5Kg
order number	3P212630000



Color Ring

Model	Color Ring
LTV-40PH-2L	white
LTV-40PH-2	red
LTV-40PH-6	orange
LTV-40PH-8	green
LTV-40PH-12	blue
order number	3P217830000



Tool Ring

Order number
3P217830000



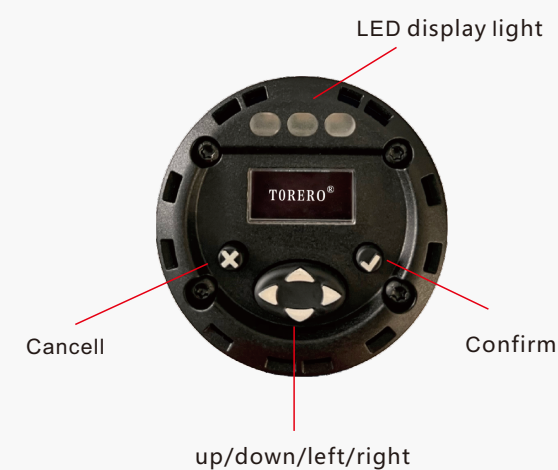
sheath

Order number
3P212500000

Electric Oil Pulse Tool



Key operation interface



Display light description

Yellow light: Low Power

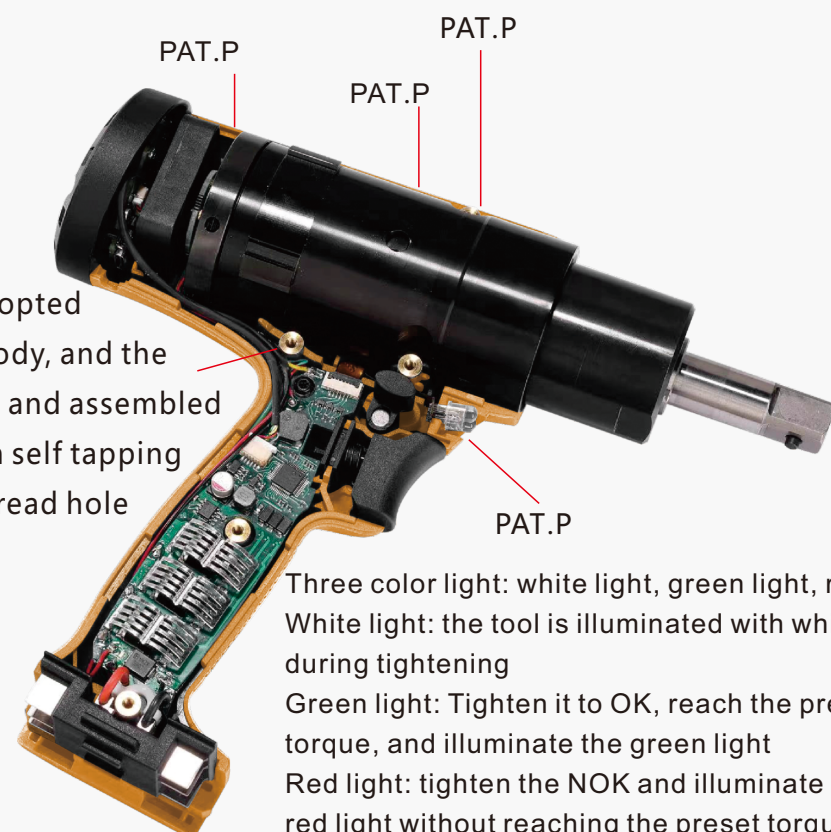
Green light: The green light is on to indicate that the tightening is OK, and the set torque value is reached;
Steady green light accompanied by three beeps, indicating that the normal number of locks has reached the batch countnumber to set the number.

Red light: The red light is on with three beeps, indicating that the locking is abnormal and the set torque has not been reached. the tightening operation needs to be performed again

Traffic lights flash: The traffic lights flash alternately to indicate that the tool is in the reverse state

Electric Oil Pulse Tool

Copper nut structure is adopted at the connection of the body, and the bolts can be disassembled and assembled repeatedly. Compared with self tapping screws, the risk of body thread hole sliding is greatly reduced



Three color light: white light, green light, red light
 White light: the tool is illuminated with white light during tightening
 Green light: Tighten it to OK, reach the preset torque, and illuminate the green light
 Red light: tighten the NOK and illuminate the red light without reaching the preset torque

Advantage

- Set batch counting to effectively prevent missing locking screws.
- The thread searching speed can be adjusted. Set the thread searching speed for bolts of different materials and lengths when correcting and locking.
- The tool maintenance times can be set. After the maintenance times are reached, the display screen will remind the operator that the tool needs to be maintained. The reminder can be stopped only after the manual button is confirmed.
- The model, serial number and production date of the tool can be queried on the display screen.
- The correct tightening times, wrong tightening times and total tightening times of tools can be queried in the display screen.
- Three color lamp: the operator can obtain the bolt tightening status more intuitively from the lamp color.

Model	Size in	Torque range Nm	Speed r/min	Weight (no battery) kg
LTO-70PH	1/4	32-42	4500	1.43
LTO-70PD	3/8	32-52	4500	1.43
LTO-80PD	1/2	50-70	4300	1.68
LTO-90PD	1/2	60-85	4300	1.81

Accessories

Battery



TLA-18-B



TLA-36



TLA-18-D

Model	Voltage V	Capacity Ah	Weight kg	Order number
TLA-18-B	18	3	0.43	3P212590001
TLA-36	36	3	0.65	3P512590000
TLA-18-D	18	6	0.65	3P212590002

Charger



TLA-18V



TLA-36V

Model	Input/Output V/Hz	V/A	Weight kg	Order number
TLA-36V	100-240	36/3	0.6	3P512610000
TLA-18V	100-240	18/3	0.5	3P212630000

Special Gear Head

TORERO special gear head is applicable to various areas with narrow space and difficult access for ordinary tools, and transmits the torque required for tightening to the bolts in this area.

Closed special gear heads are required for tightening bolts and nuts

Open special gear heads are required for pipe and hose tightening

- High-precision : +/-6%(Close) +/-15%(Open)
- It is applicable to the all housing of interface types of all electric clutch torque fixing tools and servo sensor tools
- Modular design
- Excellent ergonomic design

Special gear head - Open

Standard



B1-12-20



B2-15-20



B3-18-20



B4-20-20



B5-25-20



B6-30-20



B1-12-40



B2-15-40



B3-18-40



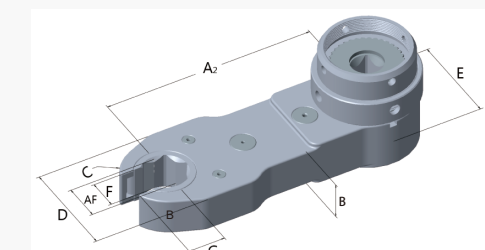
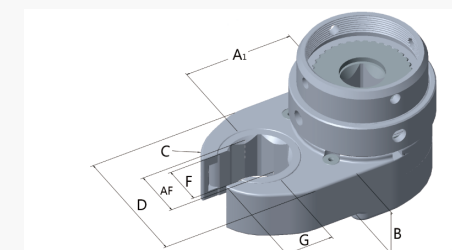
B4-20-40



B5-25-40



B6-30-40



Special Gear Head-Open

Tightening of pipe nut



Special Gear Head-Closed

Tightening of bolts and nuts



Model	B1-12-20	B1-12-40	B2-15-20	B2-15-40	B3-18-20	B3-18-40	B4-20-20	B4-20-40	B5-25-20	B5-25-40	B6-30-20	B6-30-40
A1 [mm]	27.5	—	32.5	—	36.5	—	44	—	50	—	52	—
A2 [mm]	—	69	—	80	—	94.5	—	114	—	130	—	130
B [mm]	12	—	15	—	18	—	20	—	25	—	30	—
C [mm]	15	—	18	—	20	—	24	—	25	—	28	—
D [mm]	33	—	42	—	44	—	56	—	56	—	64	—
E [mm]	32	—	37	—	45	—	50	—	58	—	65	—
F [mm]	7	—	9	—	13	—	17	—	17	—	21	—
G [mm]	13	—	15	—	17	—	20	—	22.5	—	22.5	—
AF [mm]Hexagon size	8-12	—	8-14	—	8-16	—	10-21	—	10-24	—	10-24	—
Order number	5112331201	5114331201	5102421501	5114331201	5132441801	5134441801	5142562001	5144562001	5142562501	5144562501	5142643001	5144643001

Special gear head - Closed

Standard



A1-12-20



A2-15-20



A3-18-20



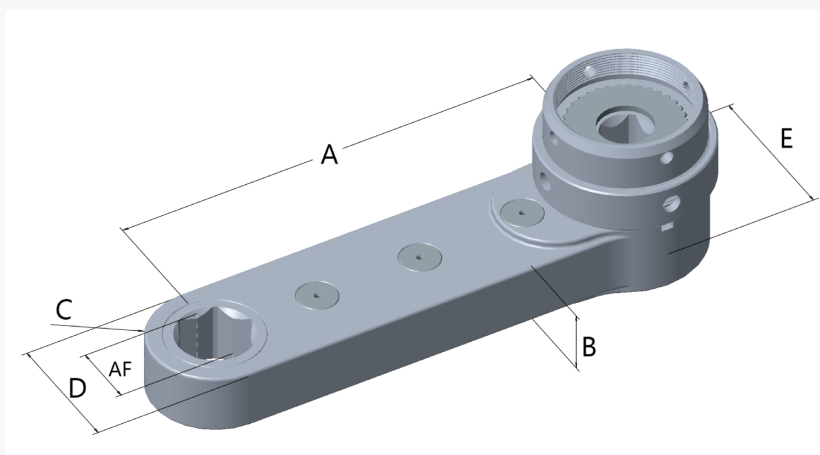
A4-20-20



A5-25-20



A6-30-20



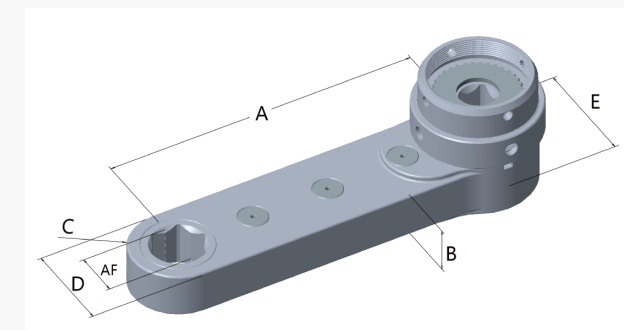
Model	A1-12-20	A2-15-20	A3-18-20	A4-20-20	A5-25-20	A6-30-20
A1 [mm]	83	96	116	140	160	156
B [mm]	12	15	18	20	25	30
C [mm]	12.5	14	17	21	23	22.5
D [mm]	25	28	34	42	46	45
E [mm]	32	37	45	50	58	65
AF [mm] Hexagon size	8-12	8-14	8-16	10-21	10-24	10-24
Order number	5014251201	5024281501	5034341801	5044422001	5044462501	5044453001

Customization

Special gear head - Closed



A



Please fill in the parameters of the closed gear head in the table for customization

Type	Torque range	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	AF (mm)
A							

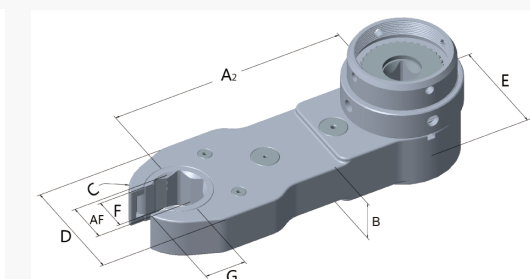
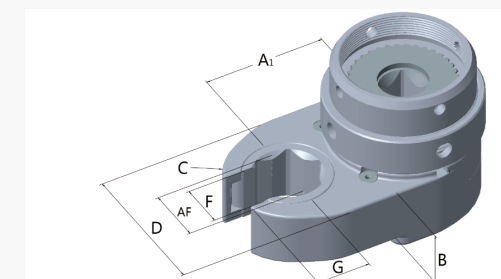
Special gear head - Open



B1



B2



Please fill in the parameters of the open gear head in the table for customization

Type	Torque range	A1 (mm)	A2(mm)	B (mm)	C (mm)	D (mm)	E (mm)	F(mm)	G(mm)	AF (mm)
B1										
B2										

EM-100 Controller System

TALEILA EM-100 controller system is equipped with EBT series tools to achieve perfect process control; The requirements for tightening bolts at key assembly stations are guaranteed, and the production efficiency of the assembly line can be greatly improved.



Easy Operation

User friendly interface

Advanced Process Control

Function introduction

Name	Function
Controller	
Weight	11kg
Display	10 inch touch screen
Storage	
TS result (state、torque、anger、identifier、time)	1000000
TS curve (time-anger、time-torque)	10000
Log	5000
Basic Function	
TS Quantity	99
Multistep Quantity	20
TASK Quantity	20
Quick setup ST	●
Open gear tools	●
Advanced Set	
TASK (Set TS with different torque for sequential tightening)	●
synchronization	●
Tightening Strategy	
Torque control	●
Torque control and angle monitoring	●
Torque control and angle control	●
Angle control and torque monitoring	●
Torque control or angle control	●
Reverse angle	●
Connect	
USB port (Date export)	●
I/O	4/4

Servo Sensor Tool-Elbow

EBT Tools characteristics



- Excellent ergonomic design, greatly improving the comfort of operation.
- The tool is light in weight, flexible and convenient in operation, and has high production efficiency.
- Built in high-precision sensor to ensure operation accuracy.
- Advanced tightening strategy to improve error proof protection.
- Modular structure, convenient maintenance.

EBT-60SC

Torque range:7-200Nm

Improve productivity

Lightweight, comfortable to operate, ergonomic



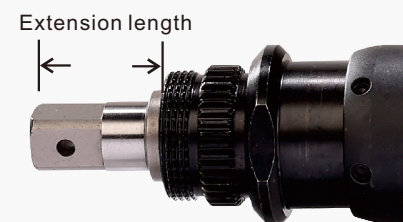
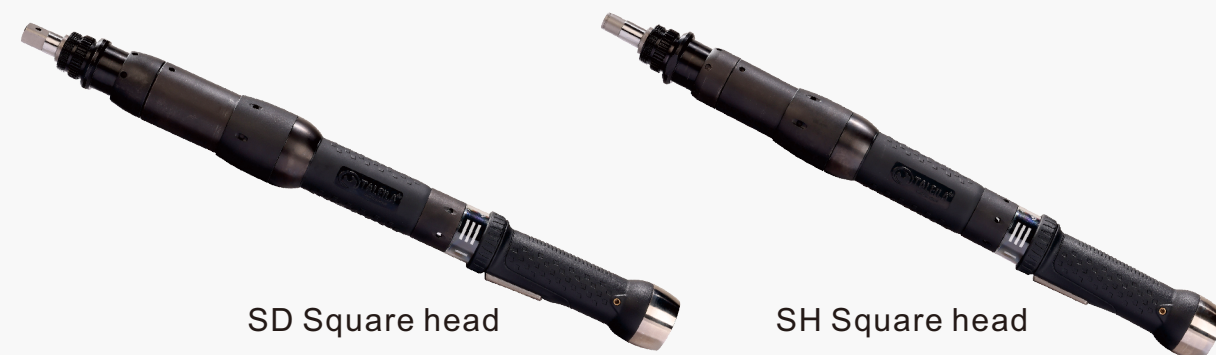
Elbow

Model	Size in	Torque range Nm	Speed r/min	Weight kg	Length mm
EBT-60SC-30	3/8	7-35	1090	1.6	447
EBT-60SC-40	3/8	8-40	1090	1.75	460
EBT-60SC-50	3/8	10-55	655	1.75	460
EBT-60SC-70	1/2	15-80	475	2.25	471
EBT-60SC-100	1/2	20-100	350	2.8	508
EBT-60SC-150	1/2	30-160	227	3.15	544
EBT-60SC-180	1/2	35-180	190	3.15	544
EBT-60SC-200	3/4	40-200	185	3.35	545

Servo Sensor Tool -Straight

EBT-60SD/SH
Torque range:5-125Nm

Ergonomic design, easy to operate and improve production efficiency



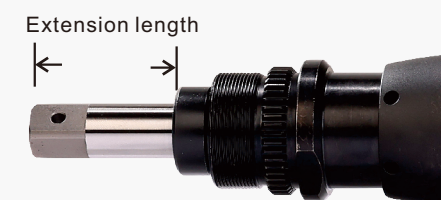
20、30		50、70、90、120	
Square head	3/8	Square head	1/2
Extension length	25.5	Extension length	30.6

Straight type

Model	Size in	Torque range Nm	Speed r/min	Weight kg	Length mm
EBT-60SD-20	3/8	5-22	1700	1.6	443
EBT-60SH-20	1/4	5-22	1700	1.6	447
EBT-60SD-30	3/8	6-35	1020	1.6	435
EBT-60SH-30	1/4	6-35	1020	1.6	439
EBT-60SD-50	1/2	10-55	740	2.2	479
EBT-60SH-50	1/4	10-55	740	2.2	482
EBT-60SD-70	1/2	15-80	505	2.5	497
EBT-60SH-70	1/4	15-80	505	2.5	499
EBT-60SD-90	1/2	20-95	410	2.55	497
EBT-60SH-90	1/4	20-95	410	2.55	499
EBT-60SD-120	1/2	25-125	305	2.55	497

Servo Sensor Tool -Telescopic Type

EBT-60SD-I25
Torque range:5-125Nm



20、30		50、70、90、120	
Square head	3/8	Square head	1/2
Extension length	37	Extension length	42
Length after compression	12	Length after compression	17

Telescopic

Model	Size in	Torque range Nm	Speed r/min	Weight kg	Length mm
EBT-60SD-20-I25	3/8	5-20	1700	1.7	482
EBT-60SD-30-I25	3/8	6-35	1020	1.7	474
EBT-60SD-50-I25	1/2	10-55	740	2.3	507
EBT-60SD-70-I25	1/2	15-80	505	2.65	524
EBT-60SD-90-I25	1/2	20-95	410	2.65	524
EBT-60SD-120-I25	1/2	25-125	305	2.65	524

Tool cable wire

Select the appropriate length of tool cable according to different use environments



Model	Length(m)	Order number
BCV-P9-3M	3m	59006840000-3m
BCV-P9-5M	5m	59006840000-5m
BCV-P9-10M	10m	59006840000-10m
BCV-P9-15M	15m	59006840000-15m

Tool lifting ring



Model	Internal diameter(mm)	Order number
ATT-RG-39	39	59990440001
ATT-RG-46	45.7	59990440002
ATT-RG-48	48	59990440003

Analog Bolt Test Stand

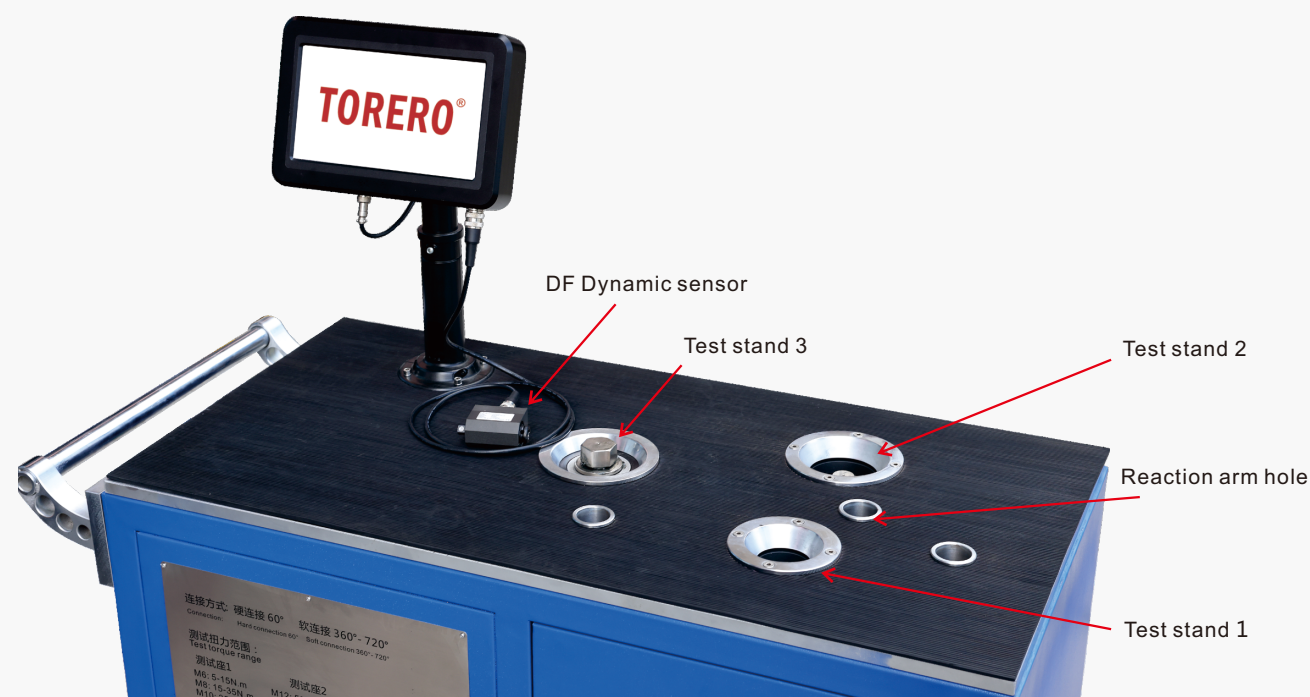
The simulated bolt test bench can provide simulated real connections for oil pulse tools, clutch tools, and electric servo tools, and hydraulic braking can achieve hardness from hard to soft connections.

- 10 inch high-definition LCD touch screen, intuitive and easy to operate.
- The soft and hard connection of hydraulic simulation can be set through the regulating valve.
- The test report shall be exported in Excel form.
- Connect the panel to manage the external dynamic torque sensor and USB interface.
- Torque curve display
- Need to connect DF dynamic sensor for use
- DF dynamic sensor shall be ordered separately (see P21)

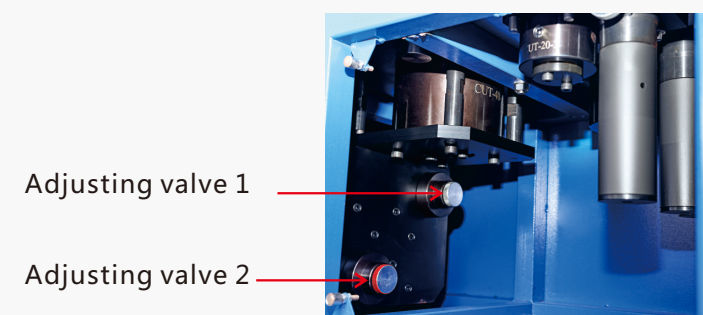


Model	Measuring range	Order number	Remark
HTD-3280	5Nm-680Nm	5T300000000	Without dynamic sensor

Analog Bolt Test Stand



Soft and hard connection settings



Turning the regulating valve can realize the setting of soft and hard connection at different degrees

Test Stand	Bolt	Torque Range Nm	Test Stand	Bolt	Torque Range Nm	Test Stand	Bolt	Torque Range Nm
1	M6	5-15	2	M12	55-88	3	M18	190-290
	M8	15-35		M14	88-148		M20	290-440
	M10	35-55		M16	148-190		M24	440-680

Digital Sensor Torque Tester



- 7-inch high-definition LCD touch screen, intuitive and easy to operate.
- Test data shall be exported in Excel form.
- Torque curve display
- The connection panel manages the external dynamic torque sensor, static torque sensor and USB interface.
- DF dynamic sensor shall be ordered separately (see P21)

Model	measurement range	Order Number	Remark
MF01-200	10Nm-200Nm	52906510000	Attached with 200N static sensor
MF02-500	25Nm-500Nm	52916510000	Attached with 500N static sensor

Dynamic sensor

Accuracy: +/-0.3% (at rated output)

Applicable to hand tools, torque tools,
or rotary tools (not applicable to impact tools)

Non contact

Clockwise, counterclockwise angle and torque measurement

Speed:10000rpm

Compact design

Note: Do not use for testing impact tools!



Model	Size	Torque Range Nm	Order Number
DF-20	1/4	1-20	5T136140000
DF-50	3/8	2.5-50	5T156140000
DF-100	1/2	5-100	5T176140000
DF-200	1/2	10-200	5T186140000
DF-500	3/4	25-500	5T196140000



Dynamic sensor signal wire

Name	Length	Order Number
Dynamic sensor signal wire	1.5M	5T186840000

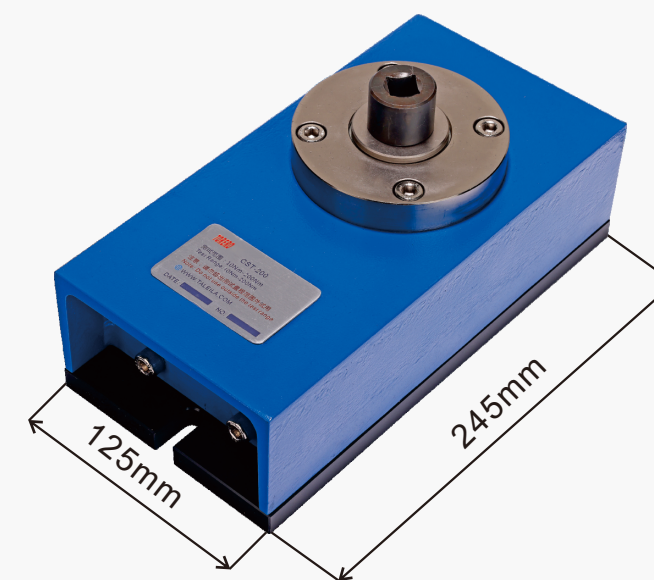
Static sensor

Accuracy: +/- 0.5%. (at rated output)

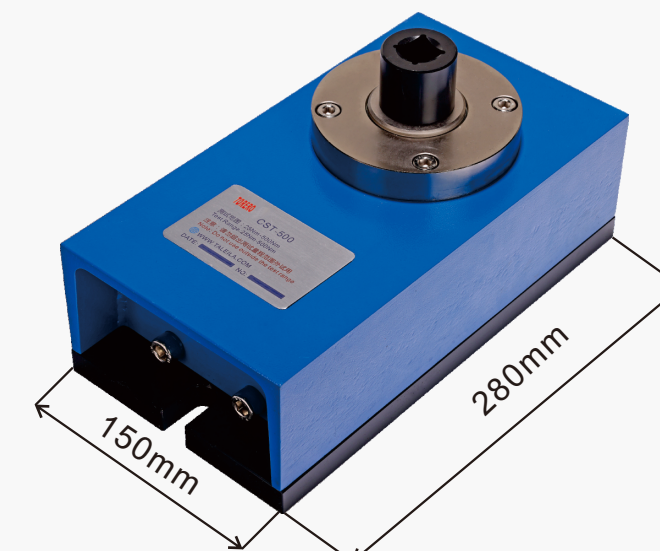
Torque inspection and adjustment for oil pulse tools
(Shut-off oil-pulse tools shall be equipped with optional soft
connection simulator accessories)

Torque inspection of manual torque wrench

Note: Do not use for testing impact tools!



F01-200



F01-500

Model	Torque Range	Weight	Order Number
F01-200	10Nm-200Nm	10.0Kg	5T046150000
F02-500	25Nm-500Nm	16.2Kg	5T036150000

Simulator Accessories

Static sensor soft connection simulator accessories



F01-200 Test stand simulator group

Model	Bolt	Order Number
F01-M8	M8	5T046140081
F01-M10	M10	5T046140101
F01-M12	M12	5T046140121
F01-M14	M14	5T046140141

F01-500 Test stand simulator group

Model	Bolt	Order Number
F02-M14	M14	5T036140141
F02-M16	M16	5T036140161
F02-M18	M18	5T036140181
F02-M20	M20	5T036140201

Standard Bolt - Tightening Torque Values Table

Torque(Nm) Bolt grade	3.6	4.6	4.8	5.8	8.8	10.9	12.9	Torque(Nm) Bolt grade	4.6	4.8	5.8	8.8	10.9	12.9
Bolt specification								Bolt specification						
M2	0.10	0.13	0.17	0.22	0.35	0.49	0.58	M18	103	121	172	275	386	463
M3	0.35	0.46	0.61	0.77	1.20	1.70	2.10	M20	144	170	240	385	541	649
M4	0.81	1.10	1.40	1.80	2.90	4.00	4.90	M22	194	230	324	518	728	874
M5	0.60	2.20	2.95	3.60	5.70	8.10	9.70	M24	249	295	416	665	935	1120
M6	2.80	3.70	4.90	6.10	9.80	14.0	17.0	M27	360	435	600	961	1350	1620
M8		8.9	10.5	15	24	33	40	M30	492	590	819	1310	1840	2210
M10		17	21	29	47	65	79	M36	855	1030	1420	2280	3210	3850
M12		30	36	51	81	114	136	M42	1360		2270	3640	5110	6140
M14		48	58	80	128	181	217	M45	1690		2820	4510	6340	7610
M16		74	88	123	197	277	333	M48	2040		3400	5450	7660	9190

Unit Conversion Table

Torque unit conversion

UNIT	Ncm	Nm	kgf.cm	kgf.m	lbf.in	lbf.ft
Ncm	1	0.01	0.102	0.00102	0.008851	0.007376
Nm	100	1	10.2	0.102	8.8	0.74
kgf.cm	9.807	0.09807	1	0.01	0.868	0.07233
kgf.m	980.7	9.807	100	1	86.8	7.233
lbf.in	11.3	0.113	1.152	0.01152	1	0.08333
lbf.ft	135.6	1.356	13.83	0.1383	12	1

Power unit conversion

UNIT	kw	kgf m/s	PS	HP
kw	1	102	1.36	1.341
kgf m/s	0.009807	1	0.01333	0.01313
PS	0.7355	75	1	0.9863
HP	0.7457	76.04	1.014	1