

TOHNICHI

TORQUE PRODUCTS

REFERENCE GUIDE



Your Torque Partner

By offering a broad range of specialty torque tools and equipment along with technical services, Tohnichi has improved the reliability of our customers' products in transportation, information technology, and many other fields that affect our daily lives.



Laboratory

Visitors can use this space. Actual work piece is carried in and proper tightening torque can be measured.



Showroom

TOHNICHI torque products are set-up and displayed so that visitor can have a clear look on what's available on the torque market and what will be coming up soon.



Lecture room

Various courses of torque engineering seminars are available.



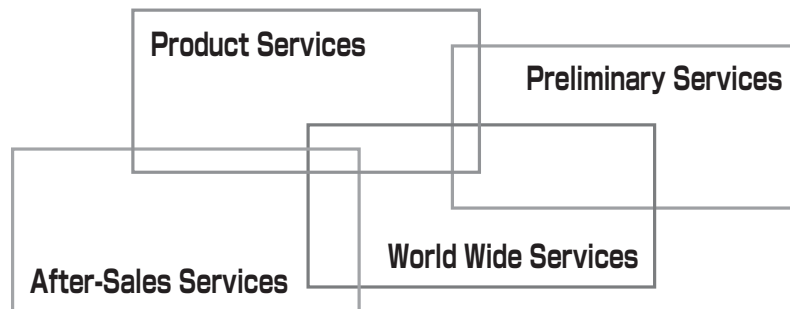
Training room

Our customers can attend workshops, covering a global training, general repair and adjustment on torque products.



Facilities and services shown above are available at Tokyo and Osaka, Japan location.

TOHNICHI SERVICE SYSTEM



Product Services

- Research and Development
- Studies on Screw-Tightening Reliability
- Studies on Durability
- Studies on Torque-Measurement

Preliminary Services

- Open Technical Laboratory and Showroom
- Torque Engineering Seminars
- Identifying Solutions
- Internet and Telephone Consulting
- Technical Reference Materials on Torque Control
- Assistance for ISO 9000 Certification

After-Sales Services

- Testing and Repair Services
- Issuing of Calibration Certificates
- Parts Supplies
- Workshops for Repair and Adjustment

World Wide Services

- Tohnichi's International Service Network
- The World's Premier Brand
- English Service
- Overseas Seminars



■ Calibration Certificate ■

- Torque wrenches are measuring instruments. The calibration certificate is the document which certifies the accuracy of the torque wrenches, which are traceable to Japanese national standards. Please keep the calibration certificate for future use.
- Accuracy % is calculated on each scale reading or preset value F.S. indicates that the calculation is based in the full scale value.
- Tohnichi torque wrenches with a calibration certificate can immediately be used even at ISO9000 plants without acceptance inspection and request of certificate.
- The calibration certificate is effective for 3 years from the date of inspection or 1 year from the date first used. Therefore, please fill the date in the calibration certificate when first used.
- Manual torque tools are normally guaranteed to 100,000 cycles or 1 year. It also can be used up to 1,000,000 cycles if the function is properly maintained and adjusted at each 100,000 cycles.

HOW TO SELECT TOHNICHI TORQUE PRODUCTS

●POWER TORQUE TOOLS


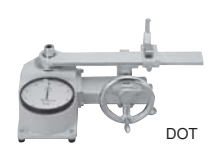
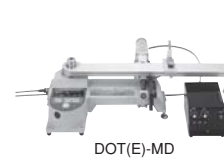

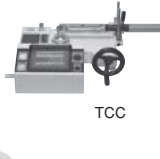



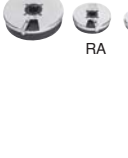













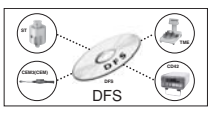

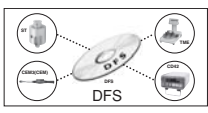


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AUXILIARY TOOL									

T=TRIGGER TYPE, L=LEVER TYPE, P=PUSH TYPE, V=MASTER VALVE TYPE, S=SWITCH TYPE







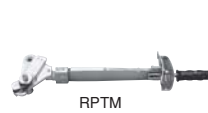

●MANUAL TORQUE TOOLS

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		DOT				
		DOT(E)-MD				
		TF				
		TCC				
		TDT				
		LC				
		ST				
		RA				
		DA				
TORQUE METER		TME				
		TM				
		5TM				
		ATG/BTG				
		TCF				
TORQUE SENSOR		ATG				
		BTG				
		TCF				
		TCF+DTF				
		TCR				
DISPLAY (DIGITAL)		CD42				
		EM250				
CALIBRATION KIT						
DATA PROCESSING		EPP16M2				
		DFS				
		HT-10				
		R-DT999				

●FORCE MEASURING INSTRUMENTS

BOLT TENSION METER		BTM/B-BTM				
		Fcon				
		TT2000				
FORCE MEASURING		FP				
		DECA				
		FG				
		RPTM				
		FP				



This seal indicates that the tool has passed a quality inspection check.

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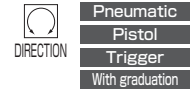
FORCE MEASURING INSTRUMENTS

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POWER TORQUE SCREWDRIVER

AUR UNI-SCREWDRIVER

High Speed and High Torque. Lever Type with Graduations.
LS Type Eliminates Missed Tightening.



LIMIT SWITCH SPEC.
AC30V Below 1A
DC30V Below 1A

AUR

Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	BIT ⊕	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.							MIN. ~ MAX.	GRAD.
AUR5N	N·m 2~5	N·m 0.1	2100	0.5	φ10	#3	1.5	AU50R	kgf·cm 20~50	kgf·cm 1.0
AUR12.5N	5~12.5	0.25	800						AU125R	50~125
AUR25N	N·m 10~25	N·m 0.5	400			—	1.7	AU250R	100~250	5.0
	N·m 2~5	N·m 0.1	2100						AU50RLS	20~50
AURLS5N	2~5	0.1	2100			—	1.7	AU125RLS	50~125	2.5
AURLS12.5N	5~12.5	0.25	800						AU250RLS	100~250
AURLS25N	N·m 10~25	N·m 0.5	400			—	1.7	AU250RLS	100~250	5.0

Note 1 : AUR12.5N, AUR25N have a fixed square drive (9.5mm).

Note 2 : Double ended bit, #3 bit(Hex. 6.35mm) is standard accessory for AUR5N.

Note 3 : LS-Type has a added feature of a limit switch that eliminates missed tightening by connecting to CNA-4mk2 count checker.

U/UR UNI-SCREWDRIVER

For Tightening Small
Size Machine Screws
and Tapping Screws.



Pneumatic
Straight
Pistol
Lever
With graduation



U

Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	BIT ⊕	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.							MIN. ~ MAX.	GRAD.
U30CN	cN·m 10~30	0.5	1600	0.4	φ5	#0	0.32	U3	kgf·cm 1~3	0.05
U60CN	20~60	1	1700						#1	0.42
U120CN	40~120	2	1400	0.5	φ5	#2	0.48	U12	4~12	0.2
U250CN	100~250	5	1200						0.75	U25
U500CN	200~500	10	950	0.5	φ6	#3	1.35	U50-2	20~50	1.0
U1000CN	400~1000		700						0.6	
ULR120CN	40~120	2	1300	0.5	φ5	#2	0.56	U12LR	4~12	0.2
ULR250CN	100~250	5	1000						0.95	U25LR
UR500CN	200~500	10	950	0.6	φ6	#3	1.45	U50R	20~50	10

Note 1 : U1000CN has a fixed square drive (9.5mm).
Use a Socket Bit or a Bit Holder for U1000CN.

Note 2 : UR type has reverse mode

Accessories : One touch femail joints are available for U30CN to U250CN.
ULR120CN and ULR250CN.

HAT Torque Driver with Battery Drive Type (Fully Automatic)

Easy Accuracy Check by
using Torque Wrench Tester.

Battery
Pistol
Trigger
With graduation



Battery charger
BC-1

Battery
BP-9 (DC9.6V)
BP-12 (DC12V)

Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	VOLTAGE DC (V)	SQUARE DRIVE mm	WEIGHT Approx. kg
	MIN. ~ MAX.	GRAD.				
HAT5N	N·m 2~5	N·m 0.1	1350	9.6	□9.5	1.8
HAT12.5N	5~12.5	0.25	1200			
HAT25N	10~25	0.5	700			
HATFM5N	2~5	0.1	1350			
HATFM12.5N	5~12.5	0.25	1200			
HATFM25N	10~25	0.5	700			
HATR5N	2~5	0.1	280			
HATR12.5N	5~12.5	0.25	250			
HATR25N	10~25	0.5	140			
HATRFM5N	2~5	0.1	280	9.6		
HATRFM12.5N	5~12.5	0.25	250			
HATRFM25N	10~25	0.5	140			

Note 1 : FM-Type has an added feature of a FM receiver that eliminates missed tightening by connecting to CNA-4mk2, count checker.

Note 2 : HAT25N, HATFM25N, HATR25N and HATRFM25N with support handle as accessory.

Note 3 : A battery is included. Battery Charger is an optional accessory.

Note 4 : R type has reverse mode

POWER TORQUE WRENCH

A/AC AIRTORK

High speed Tightening by Air Motor and Torque Wrench.
Semi-Automatic with Torque Graduations.
Limit Switch Type for Tightening Assurance.



Pneumatic
Angle
Lever
With graduation



A
Low Provisional Torque Type



A1800-A



AC
High Provisional Torque Type



ACLS
High Provisional with Limit Switch type

Female connector for LS cord is available as an optional accessory (WA5219K)

LIMIT SWITCH SPEC.
AC30V Below 1A
DC30V Below 1A

Accuracy ±3%

MODEL	CAPACITY		MAX. PROVISIONAL TIGHTENING TORQUE N·m	PROVISIONAL TIGHTENING TORQUE r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.									MIN. ~ MAX.	GRAD.
A10N	N·m 3~10	0.1	1.8	1000	0.6	φ5	254	9.5	1.0	A100	kgf·cm 30~100	1
A25N	5~25	0.25								A225	50~225	2.5
A50N	10~50	0.5	A450	100~450	5							
A100N	20~100	1	2.5	A900	200~900	10						
A180N	40~180	2	5	800	A1800	400~1800	20					
AC25N	5~25	0.25	11	1100	0.6	φ5	293	9.5	1.3	A225C7	50~225	2.5
AC50N	10~50	0.5								A450C7	100~450	5
AC100N	20~100	1	17.5	1000	φ6	335.3	12.7	1.8	A900C7	200~900	10	
AC180N	40~180	2	19	800	φ6	472.5	12.7	2.7	A1800C	400~1800	20	
ALS10N	3~10	0.1	1.8	1000	0.6	φ5	254	9.5	1.2	A100LS	30~100	1
ALS25N	5~25	0.25								A225LS	50~225	2.5
ALS50N	10~50	0.5	A450LS	100~450	5							
ACL25N	5~25	0.25	11	1100	0.6	φ5	293	1.5	1.5	A225C7LS	50~225	2.5
ACL50N	10~50	0.5								A450C7LS	100~450	5
ACLS100N	20~100	1	17.5	1000	φ6	335.3	12.7	2	A900C7LS	200~900	10	
ACLS180N	40~180	2	19	800	φ6	472.5	12.7	2.9	A1800CLS	400~1800	20	

Note : Accuracy can be checked by torque wrench tester.

AS AIRTORK

Fully Automatic Preset Type.

Pneumatic
Angle
Lever
Single purpose



AS12N



ASH80N

Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.								MIN. ~ MAX.	GRAD.
AS12N	N·m 6~12	0.2	1000	0.5	φ12	359	9.5	1.9	A120S	kgf·cm 60~120	2
ASH40N	20~40		2000	0.6		477	12.7	2.6	A400SH	200~400	Preset
ASH60N	30~60		1330			484	12.7	2.8	A600SH	300~600	
ASH80N	40~80		1000	592		12.7	3.2	A800SH	400~800		
ASH120N	60~120		640	662		12.7	4.1	A1200SH	600~1200		
ASL30N	15~30		1700	0.45		477	9.5	2.6	A300SL	150~300	
ASL45N	22.5~45		1130			484	12.7	2.8	A450SL	225~450	
ASL60N	30~60		850	592		12.7	3.2	A600SL	300~600		
ASL90N	45~90		540	662		12.7	4.1	A900SL	450~900		

When Ordering : Please specify model name and required torque value.

Example : ASH40N×30N·m / A400SH×300kgf·cm

Note 1 : If torque set value is not specified when purchased, set torque on tester.

Note 2 : Model AS12N has torque graduation. Set required torque by using torque graduation.

Note 3 : ASH models for high pressure, and ASL models for low pressure.

POWER TORQUE WRENCH

AP AIRTORK

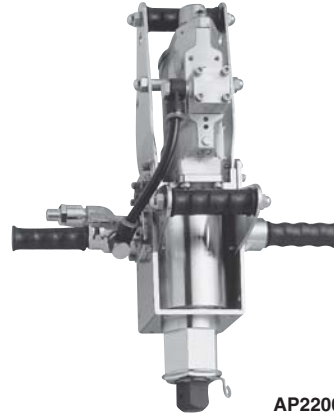


Pneumatic
Pistol
Trigger
With graduation

Applicable for Tightening Large Size Bolts. Fully Automatic with Torque Graduations.



AP220N~AP1200N



AP2200N, AP4000N



UNIVERSAL REACTION ARM

Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	OVERALL LENGTH mm	SQUARE DRIVE mm	REACTION ARM (Option)	WEIGHT Approx. kg	MODEL Metric	CAPACITY				
	MIN. ~ MAX.	GRAD.									MIN. ~ MAX.	GRAD.			
AP220N	100 ~ 220	10	277	0.5	φ12	275.5	19.0	SA400N UA450N	4.7	AP22 AP40	10 ~ 22	1			
AP400N	200 ~ 400		175								20 ~ 40				
AP700N	300 ~ 700	20	79			364	25.4	SA700N UA900N	6.7	AP70	30 ~ 70	2			
AP1200N	600 ~ 1200	50	46			375.5	31.75	UA1200N UA1800N	8.1	AP120	60 ~ 120	5			
AP2200N	1000 ~ 2200	100	19.2			508					UA3000N	15	AP220	110 ~ 220	10
AP4000N	2000 ~ 4000		12			541					UA4500N	22	AP400	200 ~ 400	

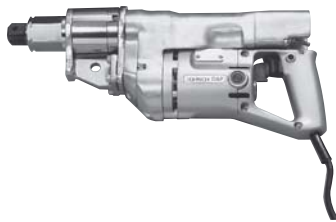
Note : Reaction arm is optional accessory.
Reaction arm is necessary to use these models.

DAP ELECTRIC TORQUE WRENCH



Electric power
Pistol
Switch
With graduation

Electric Version of AP Models.
Applicable for Tightening Large Size Bolts.



Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	VOLTAGE AC (V)	OVERALL LENGTH mm	SQUARE DRIVE mm	REACTION ARM (Option)	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.								MIN. ~ MAX.	GRAD.
DAP220N	100 ~ 220	10	314	AC 100V	318	19.0	SA400N UA450N	5.4	DAP22 DAP40	10 ~ 22	1
DAP400N	200 ~ 400		199							20 ~ 40	
DAP700N	300 ~ 700	20	90	±10% 50/60 HZ	400	25.4	SA700N UA900N	8.2	DAP70	30 ~ 70	2
DAP1200N	600 ~ 1200	50	53							418	SA1200N UA1800N

Note 1 : A type and B type are available on DAP.
A type is clockwise rotation only. B type is bidirectional rotation, but torque control is valid for clockwise only.

Note 2 : Cord length is 2.5m. If you need to use an extension cord, make sure the cross section area is no more than 2.0mm² and the length does not exceed 30m.

Note 3 : Reaction arm is optional accessory.

Note 4 : Reaction arm is necessary to use these models.

Accessories : W5 Hex wrench

SA REACTION ARM

Light Weight Reaction Arm



MODEL	CAPACITY		STANDARDS SOCKETS LENGTH
	S.I.	Metric	
SA400N	400N·m	40kgf·m	50
SA700N	700N·m	70kgf·m	62
SA1200N	1200N·m	120kgf·m	62

UA UNIVERSAL REACTION ARM

Universal Reaction Arm



MODEL	WEIGHT Approx. kg
UA450N	1.2
UA900N	2.6
UA1800N	4
UA3000N	7.2
UA4500N	10.9
UA9000N	18
UA18000N	—

Note : UA9000N, UA18000N are available upon request.

MULTIPLE UNITS

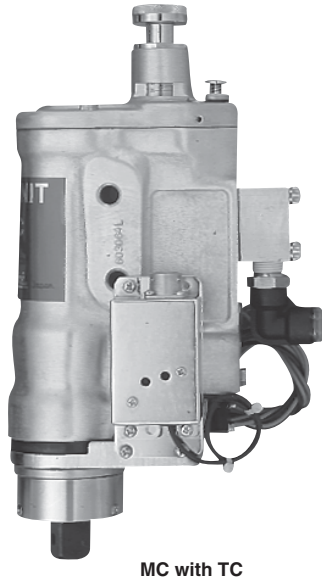
MG/ME/MF/MC NUTRUNNERS

Multi-Spindle Nutrunners for Screws and Bolts.

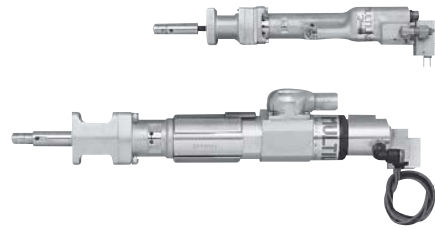
- Straight
- Pneumatic
- Multiple Unit
- Master valve
- With graduation



ME



MC with TC



MG

MF

Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.								MIN. ~ MAX.	GRAD.
MG60CN	cN·m 20~60	cN·m 0.5	1370	0.4	φ5	268	6.35 Hex	0.68	M6G	kgf·cm 2~6	kgf·cm 0.05
MG120CN	40~120	1	720						M12G	4~12	0.1
MG250CN	100~250	2.5	350						M25G	10~25	0.25
MF6N	N·m 3~6	N·m 0.1	1000	0.4	φ6	411.1	2.0	M60F	kgf·cm 30~60	kgf·cm 1	
MF12N	6~12	0.2	500					M120F	60~120	2	
ME25N	N·m 10~25	N·m 0.5	1050	0.4	φ7.5	420.6 (457.6)	9.5	4.7	M250E2	kgf·cm 100~250	kgf·cm 5
ME45N	20~45	1	540						M450E2	200~450	10
ME80N	35~80	2	310						M800E2	350~800	20
ME126N	50~126	2	200						M1260E2	500~1260	10
MC220N	N·m 100~220	N·m 10	277	0.5	φ8	287.5	19.0	4.6	M22C	kgf·m 10~22	kgf·m 1
MC400N	200~400	175	175						M40C	20~40	2
MC700N	300~700	20	79						M70C	30~70	2
MC1200N	600~1200	50	46						M120C	60~120	5
MC2200N	1000~2200	100	19.2						M220C	100~220	10
MC4000N	2000~4000	12	12						M400C	200~400	10

Note 1 : Overall Length in parenthesis is with TC Sensor.

When ordering the Nutrunner with TC Sensor, Please add "TC" at the end.

Example : ME25N with Sensor - ME25N-TC

Note 2 : MG and ME models have 6.35 hex. bit holder.

Accessories : Dial setting stick

DCME ELECTRIC NUTRUNNER

Electric Nutrunners for Multi-Spindle

- Electric power
- Multiple Unit
- Switch
- With graduation



Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	VOLTAGE AC (V)	OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.							MIN. ~ MAX.	GRAD.
DCME25N	N·m 10~25	N·m 0.5	1050	SINGLE PHASE 200 50/60Hz (100)	302.4 (339.4)	9.5	5	DCM250E	kgf·cm 100~250	kgf·cm 5
DCME45N	20~45	1	540					DCM450E	200~450	10
DCME80N	30~80	2	310					DCM800E	350~800	20
DCME125N	50~125	5	200					DCM1250E	500~1250	50

Note : Overall Length in parenthesis is with TC Sensor.

When ordering the Nutrunner with TC Sensor, please add "TC" at the end.

Example : DCME25N with Sensor - DCME25N-TC

DCM250E with Sensor - DCM250E-TC

AME ANGLE NUTRUNNERS

Angle Head Type Nutrunners. Suitable for Tightening by Robot.

- Pneumatic
- Multiple Unit
- Master valve
- With graduation



Accuracy ±5%

MODEL	CAPACITY		FREE SPEED r.p.m.	AIR PRESSURE MPa	HOSE IN DIA. mm	OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.								MIN. ~ MAX.	GRAD.
AME25N	N·m 10~25	N·m 0.5	1200	0.5	φ7.5	369.1 (407.1)	9.5	2.6	AM250E2	kgf·cm 100~250	kgf·cm 5
AME35N	15~35	1	800						375.6 (413.6)	2.7	AM350E2
AME50N	20~50	1	600			483.6 (521.6)	2.9	AM500E2	200~500	10	
AME70N	30~70	1	380			554.1 (592.1)	3.6	AM700E2	300~700	10	

Note : Overall Length in parenthesis is with TC Sensor.

When ordering the Nutrunner with TC Sensor, please add "TC" at the end.

Example : AME25N with Sensor - AME25N-TC

AM250E2 with Sensor - AM250E2-TC

Accessories : Dial setting stick

TORQUE WRENCH

QL/QLE TORQUE WRENCH

Adjustable Torque Wrench with Fixed Ratchet Head.



QL



QLE

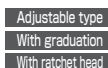
Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
QL1.5N	N·m 0.5~1.5	0.025	175	6.35	0.12	15QL	kgf·cm 5~ 15	0.25
QL3N	1~ 3					30QL	10~ 30	0.5
QL6N	2~ 6	0.1	185	9.5	0.18	60QL	20~ 60	1
QL12N	4~ 12	0.2				120QL	40~ 120	2
QL25N	5~ 25	0.25	220	12.7	0.25	225QL3	50~ 250	2.5
QL50N	10~ 50	0.5	260			450QL3	100~ 500	5
QL100N	20~ 100	1	340	19.0	0.73	900QL3	200~1000	10
QL140N	30~ 140		400			1400QL3	300~1400	
QL200N	40~ 200	2	495	25.4	1.4	1800QL3	400~2000	20
QL280N	40~ 280		695			2800QL3	4~ 28	kgf·m 0.2
QL420N	60~ 420	5	975	19.0	3.2	4200QL2	6~ 42	
QLE550N	100~ 550		1190			5500QLE	10~ 55	
QLE750N	100~ 750	10	1365	25.4	7.1	7500QLE	10~ 75	0.5
QLE1000N	100~1000		1535			10000QLE	10~100	
QLE1400N	200~1400	20	1795	19.0	13.1	14000QLE	20~140	1
QLE2100N	500~2100		1950			21000QLE	50~210	

Note : QL25N (225QL3)~QL280N (2800QL3) models are with resin grip.
Other models are with knurled handle.
E-type models are with an extension bar handle.

QL-MH TORQUE WRENCH

Adjustable Torque Wrench with Fixed Ratchet Head.
Knurled Metal Handle Type.



QL-MH

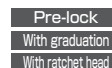
Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
QL25N-MH	N·m 5~ 25	0.25	220	9.5	0.25	225QL-MH	kgf·cm 50~ 250	2.5
QL50N-MH	10~ 50					0.5	260	0.45
QL100N-MH	20~100	1	340	12.7	0.69	900QL-MH	200~1000	10
QL140N-MH	30~140					0.79	1400QL-MH	
QL200N-MH	40~200	2	495	19.0	1.4	1800QL-MH	400~2000	20
QL280N-MH	40~280					695	2800QL-MH	kgf·m 4~ 28

Note : American models available upon request.

PQL TORQUE WRENCH

Pre-Lock Type Torque Wrench with Fixed Ratchet Head.



PQL

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
PQL25N	N·m 5~ 25	0.25	215	9.5	0.25	225PQL	kgf·cm 50~ 250	2.5
PQL50N	10~ 50					0.5	250	0.4
PQL100N	20~100	1	325	12.7	0.65	900PQL	200~1000	10
PQL140N	40~140					0.75	385	
PQL200N	40~200	2	470	1.4	1800PQL	400~2000	20	

Note : Torque set is by hex wrench key.
Accessories : Hex wrench key

TORQUE WRENCH

TiQL/TiLQL/TiEQL (E) TiQLLS/TiLQLLS/TiEQLLS

TORQUE WRENCH

- Pre-lock
- With graduation
- With ratchet head



Super Light Weight Titanium Pre-Lock Type Torque Wrench with Fixed Ratchet Head. Suitable for Large Size Bolts Tightening Operation under Difficult Working Conditions.



TiQL



TiEQL

LIMIT SWITCH SPEC.
AC30V Below 1A
DC30V Below 1A

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
TiQL180N	40~180	N·m	494	12.7	0.9	1800TiQL	400~1800	20
TiQLLS180N						1800TiQLLS		
TiLQL180N						1800TiLQL		
TiLQLLS180N						1800TiLQLLS		
TiQL360N	80~360	N·m	594	19.0	1.9	3600TiQL	8~36	0.2
TiEQL360N						3600TiEQL		
TiEQLLS360N						3600TiEQLLS		
TiEQL750N						7500TiEQL		
TiEQL1400N	14000TiEQL							
TiEQL750N	100~750	5	1365	4.5	7500TiEQL	10~75	0.5	
TiEQL1400N	200~1400	10	1794	7.5	14000TiEQL	20~140	1	

Note 1 : The titanium is about 1/2 the weight of steel.
Suitable for high places and production sites.
Note 2 : E-type models are with an extension bar handle.

DQL/DQLE TORQUE WRENCH

- Adjustable type
- With graduation
- With ratchet head



Adjustable Type Torque Wrench with Double Male Square Drives. Ratchet Head for Both Clockwise and Counter-Clockwise Tightening.



DQL



DQLE

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
DQL200N	40~200	N·m	495	12.7	1.4	1800DQL3	400~2000	20
DQL280N	40~280	N·m				2800DQL2	4~28	0.2
DQLE550N	100~550	5	1190	19.0	5.1	5500DQLE	10~55	0.5
DQLE750N	100~750		1365			7500DQLE	10~75	
DQLE1000N	100~1000		1535			10000DQLE	10~100	

Note : E-type models are with an extension bar handle.

MTQL TORQUE WRENCH

- Adjustable type
- With graduation
- With ratchet head



Adjustable Torque Wrench with Polished Surface for Motorcycle Assembly and Maintenance. Micrometer Adjustable Type.



MTQL

Accuracy ±5%

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY				
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.			
MTQL40N	5~40	0.5	245	9.5	0.42	—	kgf·m	kgf·m			
MTQL70N	10~70	1					283	0.47	700MTQL	1~7	0.1
MTQL140N	20~140						390	12.7	0.77	1400MTQL	

Note : With carrying case.

PQLZ INSULATED TORQUE WRENCH

- Pre-lock
- Insulated body
- With graduation



Insulated Body for Safety from Electrical Shock.



PQLZ

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
PQLZ25N	5~25	0.25	227	9.5	0.28	225PQLZ	50~250	2.5
PQLZ100N	20~100	1	340	12.7	0.8	900PQLZ	200~1000	10

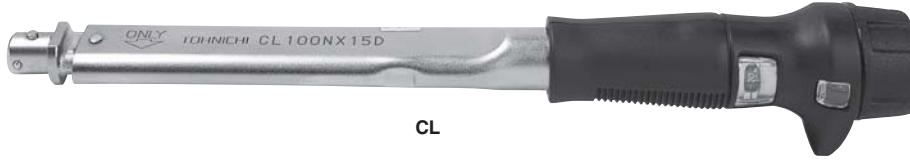
TORQUE WRENCH

CL/CLE TORQUE WRENCH

Adjustable Type Torque Wrench with Interchangeable Head.



Adjustable type
Interchangeable head
With graduation



CL



CLE

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNICHI HEAD SIZE	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
CL1.5N×8D	0.5 ~ 1.5	0.025	155	8D	0.1	15CL	kgf·cm	kgf·cm
CL3N×8D	1 ~ 3						5 ~ 15	0.25
CL6N×8D	2 ~ 6						20 ~ 60	1
CL12N×8D	4 ~ 12	0.2	165	10D	0.15	120CL	40 ~ 120	2
CL25N×10D	5 ~ 25	0.25	200		0.22	225CL3	50 ~ 250	2.5
CL50N×12D	10 ~ 50	0.5	230	12D	0.37	450CL3	100 ~ 500	5
CL50N×15D	10 ~ 50		235			500CL3	100 ~ 500	
CL100N×15D	20 ~ 100	1	310	15D	0.52	900CL3	200 ~ 1000	10
CL140N×15D	30 ~ 140		370		0.67	1400CL3	300 ~ 1400	
CL200N×19D	40 ~ 200		455		1.2	1800CL3	400 ~ 2000	
CL280N×22D	40 ~ 280	2	655	22D	1.8	2800CL3	kgf·m	kgf·m
CL420N×22D	60 ~ 420		925		3.1	4200CL2	6 ~ 42	0.2
CLE550N×27D	100 ~ 550	5	1139	27D	4.7	5500CLE	10 ~ 55	0.5
CLE750N×27D	100 ~ 750		1306		7.0	7500CLE	10 ~ 75	
CLE850N×32D	200 ~ 850		1315		6.5	8500CLE	20 ~ 85	
CLE1200N×32D	300 ~ 1200	10	1480	32D	8.5	12000CLE	30 ~ 120	1

Note 1 : CL25N (225CL3)~CL280N (2800CL3) models are with resin grip.

Other models are knurled handle.

E-type models are with an extension bar handle.

Note 2 : Interchangeable head are sold separately. See page 27-29.

Note 3 : PH interchangeable heads can not be used with this series.

CL-MH TORQUE WRENCH



Adjustable type
Interchangeable head
With graduation

Interchangeable Head,
Micrometer Adjustable Type. Multiple
Purpose Type.
Knurled Metal Handle Type.



CL-MH

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNICHI HEAD SIZE	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
CL25N×10D-MH	N·m 5 ~ 25	N·m 0.25	200	10D	0.22	225CL-MH	kgf·cm	kgf·cm
CL50N×12D-MH	10 ~ 50	0.5	230	12D	0.37	450CL-MH	100 ~ 500	5
CL50N×15D-MH	10 ~ 50		235			500CL-MH	100 ~ 500	
CL100N×15D-MH	20 ~ 100	1	310	15D	0.52	900CL-MH	200 ~ 1000	10
CL140N×15D-MH	30 ~ 140		370		0.67	1400CL-MH	300 ~ 1400	
CL200N×19D-MH	40 ~ 200		455		1.2	1800CL-MH	400 ~ 2000	
CL280N×22D-MH	40 ~ 280	2	655	22D	1.8	2800CL-MH	kgf·m	kgf·m
							4 ~ 28	0.2

Note 1 : Overall length is without head.

Note 2 : Interchangeable head are sold separately. See page 27-29.

Note 3 : PH interchangeable heads can not be used with this series.

Note 4 : American models available upon request.

PCL/PCLLS TORQUE WRENCH

Pre-lock
Interchangeable head
With graduation

Interchangeable Head,
Micrometer Adjustable, Pre-Lock
Type.



PCL

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNICHI HEAD SIZE	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
PCL25N×10D	N·m 5 ~ 25	N·m 0.25	190	10D	0.22	225PCL	kgf·cm	kgf·cm
PCL50N×12D	10 ~ 50	0.5	220	12D	0.32	450PCL	100 ~ 500	5
PCL50N×15D	10 ~ 50		225			500PCL	100 ~ 500	
PCL100N×15D	20 ~ 100	1	295	15D	0.48	900PCL	200 ~ 1000	10
PCL140N×15D	30 ~ 140		355		0.63	1400PCL	400 ~ 1400	
PCL200N×19D	40 ~ 200		435		1.3	1800PCL	400 ~ 2000	
PCL25N×10D	5 ~ 25	0.25	190	10D	0.22	225PCLLS	50 ~ 250	2.5
PCL50N×12D	10 ~ 50	0.5	220	12D	0.32	450PCLLS	100 ~ 500	5
PCL50N×15D	10 ~ 50		225			500PCLLS	100 ~ 500	
PCL100N×15D	20 ~ 100	1	295	15D	0.48	900PCLLS	200 ~ 1000	10
PCL140N×15D	30 ~ 140		355		0.63	1400PCLLS	400 ~ 1400	
PCL200N×19D	40 ~ 200		435		1.3	1800PCLLS	400 ~ 2000	

Note 1 : Overall length is without head.

Note 2 : Interchangeable head are sold separately. See page 27-29.

Note 3 : PH interchangeable heads can not be used with this series.

Accessories : Hex Wrench key

TORQUE WRENCH

YCL TORQUE WRENCH



Adjustable type
Interchangeable head
With graduation

Two Step Motion, Over Torque Preventing Adjustable Type Torque Wrench with Interchangeable Head.



YCL

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNICHI HEAD SIZE	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
YCL12N×10D	N·m 5~12	N·m 0.1	225	10D	0.32	120YCL	kgf·cm 50~120	kgf·cm 1
YCL23N×10D	10~23	0.2				230YCL	100~230	2
YCL45N×12D	20~45	0.25	272	12D	0.5	450YCL	200~450	2.5
YCL70N×12D	30~70	0.5				700YCL	300~700	5
YCL90N×15D	40~90	0.25	366	15D	1	900YCL	400~900	2.5
YCL140N×15D	60~140	0.5				1400YCL	600~1400	5
YCL180N×19D	80~180		570	19D	1.7	1800YCL	800~1800	

Note 1 : Overall length is without head.

Note 2 : Interchangeable head are sold separately. See page 27-29.

Note 3 : PH interchangeable heads can not be used with this series.

MT70N TORQUE WRENCH

Pre-lock
Interchangeable head
With graduation



Pre-Lock Type Torque Wrench with Polished Surface. Standard Wrenches Become a Part of Torque Wrench.



MT

Accuracy ±5%

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.				MIN. ~ MAX.	GRAD.
MT70N	N·m 10~70	N·m 0.2	300	0.65	Metric MT-7	kgf·m 1.0~7.0	kgf·m 0.02

Note 1 : Overall length is without head.

Note 2 : Shown with optional ring-head wrench.

Note 3 : With carrying case, scale and hex key wrench.

Note 4 : Max. clamp width for exchangeable tool is approx. 21mm.

Note 5 : Min. exchangeable Hex wrench key size 5mm

PHL/PHLE PIPE HEAD WRENCH

Adjustable type
With graduation



Adjustable Type Torque Wrench with Pipe-Wrench Head for Piping Operations and Construction.



PHL

Accuracy ±5%

MODEL	CAPACITY		OVERALL LENGTH mm	PIPE WRENCH NOMINAL SIZE	GRIPPABLE PIPE DIAMETER mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.						MIN. ~ MAX.	GRAD.
PHL50N	N·m 10~50	N·m 0.5	335	350	13~38	1.46	500PHL3	kgf·cm 100~500	kgf·cm 5
PHL100N	20~100	1					900PHL3	200~1000	10
PHL140N	40~140		470	1400PHL3	400~1400				
PHL200N	40~200	550	1800PHL3	400~2000	20				
PHL280N	40~280	2	765	450	26~52	2.92	2800PHL3	kgf·m 4~28	kgf·m 0.2
PHL420N	60~420	3	1080				4200PHL2	6~42	0.3
PHLE850N	200~850	5	1600	9.63	8500PHLE	20~85	0.5		
PHLE1300N	300~1300	10	1745	11.63	13000PHLE	30~130	1		

Note 1 : E-type models are with an extension bar handle.

SCL TORQUE WRENCH

Adjustable type
Interchangeable head
With graduation



Torque Wrench for European Type Head.



SCL

Accuracy ±3%

MODEL	CAPACITY		HEAD SIZE mm	EFFECTIVE LENGTH mm	OVERALL LENGTH mm	WEIGHT Approx. kg
	MIN. ~ MAX.	GRAD.				
SCL25N-9×12	N·m 5~25	N·m 0.25	9×12	175	208	0.22
SCL50N-9×12	10~50	0.5	9×12	195	239	0.37
SCL100N-9×12	20~100	1	9×12	270	314	0.52
SCL200N-14×18	40~200	2	14×18	420	464	1.2

Note 1 : Overall length is without head.

Note 2 : For DIN standard head, not suitable with Tohnichi standard head.

TORQUE WRENCH

MPQL

MARKING TORQUE WRENCH

- Pre-lock
- With ratchet head
- With graduation



Fixed Ratchet Head. Pre-Lock Type Torque Wrench with Marking Unit Inside.

Special Socket with Refillable Ink Cartridge Marks Approx. 6,000 Cycles.



MPQL

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
MPQL50N	N·m 10~50	N·m 0.5	245	12.7	0.7	450MPQL	kgf·cm 100~500	5
MPQL100N	20~100	1	325		0.95	900MPQL	200~1000	10
MPQL140N	40~140		385		1.1	1400MPQL	400~1400	
MPQL200N	40~200		470		1.8	1800MPQL	400~2000	20
MQL280N	40~280	2	675	19.0	2.6	2800MQL	kgf·m 4~28	0.2

Note 1 : Two different size sockets, standard type and long type are available. See the combination table.

Note 2 : These sockets are designed especially for the MPQL and standard sockets cannot be used.

Note 3 : To avoid confusion, please contact Tohnichi for sales assistance.

COMPOSITION	STANDARD TYPE	LONG TYPE
BODY	1	1
Socket	1	1
Socket Adapter Standard Type	1	—
Socket Adapter Long Type	—	1
Marker	1	1

For Example : 21 × MPQL100N-MK52B
24L × 900MPQL-MK52 + 772

SOCKET

WIDTH	No.	ADAPTING MODEL
12	(701)	MPQL50N
13	(702)	
14	(703)	
16	(704)	
17	(705)	
18	(706)	
19	(707)	
21	(708)	
22	(709)	
24	(710)	
27	(711)	MQL280N
22	(720)	
24	(721)	
27	(722)	
30	(723)	

SOCKET ADAPTER

CATALOG NO.	DIMENSION MM
(748)	12.7
(749)	
(751)	
(752)	19

Note : 749 and 752 are standard type.
748 and 751 are long type.
Long type is 100mm longer than Standard type.

MARKER CARTRIDGE

MODEL	CATALOG NO.	COLOR
MARKER MK52R	(780)	RED
MARKER MK52B	(781)	BLUE
MARKER MK52	(782)	(Empty)
MARKER MK92R	(783)	RED
MARKER MK92B	(784)	BLUE
MARKER MK92	(785)	(Empty)

Note 1 : MK92 doesn't fit with the socket, opposite size 12 - 16mm.

Note 2 : 780, 781, 783 and 784 are rubber tip.
782 and 785 are felt tip.

SPARE INK

COLOR	CATALOG NO.	NET, ML
RED	(770)	60
BLUE	(771)	60
WHITE	(406)	55
YELLOW	(772)	55
Solvent for R/B	(790)	60
Solvent for W/Y	(791)	55

CMQSP

Marking torque wrench for Hex socket cap screw

NEW

- Single purpose
- With ratchet
- With graduation



Paint Marking on Hex socket cap screw and work piece



CMQSP

マーキング付きボルト

Torque value can be set upon request at time of order.

Note : This torque wrench has to be set with torque wrench tester
Please specify setting torque unless you have torque wrench tester

Refill ink and solvent for Marking wrench

Description	Catalog no.	Color
Refill ink W	(406)	White
Refill ink Y	(772)	Yellow
Solvent	(791)	For White and Yellow

Accuracy $\pm 3\%$

Model name	Capacity of setting torque (N.m)		Hex Key size Width across flat mm	Total Length mm	Weight kg
	MIN. ~ MAX.	N·m			
CMQSP-M6	5~25	5	241	0.85	
CMQSP-M8	10~50	6			
CMQSP-M10	20~100	8	320	1.13	
CMQSP-M12	30~140	10	380	1.23	

Option

Description	Catalog no.
Marker Head for CMQSP	(792)
CMQSP-M6 Bit	(724)
CMQSP-M8 Bit	(725)
CMQSP-M10 Bit	(726)
CMQSP-M12 Bit	(727)

TORQUE WRENCH

QLLS/CLS/PQLLS TORQUE WRENCH



- With limit switch
- Adjustable type
- With graduation

Torque Wrench with Limit Switch for Eliminating Missed Tightening.



QLLS

LIMIT SWITCH SPEC.
AC30V Below 1A
DC30V Below 1A

Accuracy ±3%

MODEL		MODEL		MODEL	
S.I.	Metric	S.I.	Metric	S.I.	Metric
QLLS12N	120QLLS	QLLS12D×8D	120CLLS	PQLLS25N	225PQLLS
QLLS25N	225QL3LS	QLLS25D×10D	225CL3LS	PQLLS50N	450PQLLS
QLLS50N	450QL3LS	QLLS50D×12D	450CL3LS	PQLLS100N	900PQLLS
QLLS100N	900QL3LS	QLLS50D×15D	500CL3LS	PQLLS140N	1400PQLLS
QLLS140N	1400QL3LS	QLLS100D×15D	900CL3LS	PQLLS200N	1800PQLLS
QLLS200N	1800QL3LS	QLLS140D×15D	1400CL3LS		
QLLS280N	2800QL3LS	QLLS200D×19D	1800CL3LS		
QLLS420N	4200QL2LS	QLLS280D×22D	2800CL3LS		
		QLLS420D×22D	4200CL2LS		

Optional Accessories : WA5219K, Female Connector

Note 1 : For specifications, refer to QL, CL and PQL model series information.
Note 2 : Limit switch can be installed on other click type torque wrenches.
Note 3 : Good to work with CNA-4mk2 count checker.

FM96MC REMOTE SIGNALING TORQUE SYSTEM Wireless

FM-Wave Remote Signal, Tightening Verification System.



ex : QLFM100N
SPFM38N×14

R-FM96D

FM transmitter can be installed on all LS type torque wrenches, such as QLLS.

Accuracy ±3%

MODEL	DESCRIPTION	MODEL	DESCRIPTION	ACCESSORIES
F-FM96MC	Transmitter	R-FM96D	FM96D receiver Output 1a (DC30V 1A, AC125V 0.5A) Dimension : W150×D210×H51mm Weight : Approx.1.7 kgs Power supply: AC100-115V 50/60Hz	Antenna

Note 1 : For specifications of torque wrenches, refer to standard models.
Note 2 : Use torque wrench tester for presetting SPFM/RSPFM/QSPFM and CSPFM wrenches.
Otherwise, ask for torque setting when purchasing.
Note 3 : Totally, 192 channels.
Note 4 : If CNA-4mk2 counter is connected to receiver, CNA-4mk2 makes torque verification system more effective.
Note 5 : Power source AC220V is available upon request.
Note 6 : AC220V is also available

OPTIONAL PARTS FOR FM

MODEL	DESCRIPTION
FM-ANT	Whip Antenna
FM-CNT	Diverge Connector for Antenna
FM-COD	Extension Wire for Antenna
FM-BCY	Battery Checker

CNA-4mk2 Poka Patrol

NEW

Tightening number control by using LS, FM signal torque wrench (Max. 4 pcs) with one CNA-4mk2 Random work piece (Max. 4 pcs) vs torque wrench matching in Tightening number control Count checker to eliminate mistightening FM signal receivable upon request (Max. 4 pcs)




COUNT DISPLAY	2 digit, 7 segment LED
OK, NG CONFORMITY	Domed shape lamp (OK: Green/ NG: Red)
COUNT ENTERING PORT	Max. 4
PRESET MAX VALUE	99 (Free setting by Key entering)
SELECT FUNCTION	Max. 4 Work piece (Free setting by Key entering)
OK, NG JUDGMENT	Judge by Preset value or End signal
	Automatically judgment timer (1~300 sec.)
	OK: Green lamp
OK, NG OUTPUT	NG: Red lamp + Buzzer (4 pattern)
	OK and NG respectively relay contacts
	(Relay output rating: DC30V 1A, AC125V 0.5A)
	Normal mode (same as current model)
MODE EXCHANGE	Multiple mode (Max. 4 pcs torque wrench usable)
POWER SUPPLY	AC100V -220V 50/60Hz

Note : Count contact Max. 4 (LS or FM total)
FM receivable board is optional accessory
Automatic Judgment Timer, Automatic Reset Timer, Double count elimination Timer can be set by key operation

TORQUE WRENCH

QSP TORQUE WRENCH


 Single purpose
 With ratchet head
 Without graduation

Preset Type Torque Wrench with Fixed Ratchet Head.



QSP

CAUTION : Use a torque wrench tester for setting torque. Otherwise, ask for torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	CAPACITY	
	MIN. ~ MAX.					MIN. ~ MAX.	
	N·m					kgf·cm	
QSP1.5N	0.5 ~ 1.5		165	6.35	0.1	5 ~ 15	
QSP3N	1 ~ 3					10 ~ 30	
QSP6N	2 ~ 6					20 ~ 60	
QSP12N	4 ~ 12		175		0.15	40 ~ 120	
QSP25N3	5 ~ 25		215	9.5	0.2	50 ~ 250	
QSP50N3	10 ~ 50		250		0.4	100 ~ 500	
QSP100N3	20 ~ 100		330	12.7	0.65	200 ~ 1000	
QSP140N3	40 ~ 140		385		0.7	300 ~ 1400	
QSP200N3	40 ~ 200		470		1.2	400 ~ 2000	
						kgf·m	
QSP280N3	40 ~ 280		670	19.0	1.8	4 ~ 28	
QSP420N	60 ~ 420		970		3.1	6 ~ 42	

Accessories : Adjusting keys. Refer to page 26.

Note 1 : Please specify model name and required set torque when ordering.
 Example QSP50N3×40N·m
 QSP50N3×400kgf·cm

CSP TORQUE WRENCH


 Single purpose
 Interchangeable head
 Without graduation

Preset Type Torque Wrench with Interchangeable Head.



CSP

CAUTION : Use a torque wrench tester for setting torque. Otherwise, ask for torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNICHI HEAD SIZE	WEIGHT Approx. kg	CAPACITY	
	MIN. ~ MAX.					MIN. ~ MAX.	
	N·m					kgf·cm	
CSP1.5N×8D	0.5 ~ 1.5		145	8D	0.07	5 ~ 15	
CSP3N×8D	1 ~ 3					10 ~ 30	
CSP6N×8D	2 ~ 6					20 ~ 60	
CSP12N×8D	4 ~ 12		155		0.1	40 ~ 120	
CSP25N3×10D	5 ~ 25		190	10D	0.15	50 ~ 250	
CSP50N3×12D	10 ~ 50		220	12D	0.3	100 ~ 500	
CSP50N3×15D	10 ~ 50		225			100 ~ 500	
CSP100N3×15D	20 ~ 100		300	15D	0.45	200 ~ 1000	
CSP140N3×15D	40 ~ 140		355		0.55	300 ~ 1400	
CSP200N3×19D	40 ~ 200		430	19D	1	400 ~ 2000	
						kgf·m	
CSP280N3×22D	40 ~ 280		635	22D	1.4	4 ~ 28	
CSP420N×22D	60 ~ 420		920		2.7	6 ~ 42	

Note 1 : Overall length is without head.

Note 2 : Interchangeable heads are sold separately. See page 27-29.

Note 3 : Please specify model name and required set torque when ordering.

Example CSP50N3×15D×40N·m
 CSP50N3×15D×400kgf·cm

QRSP TORQUE WRENCH


 Single purpose
 Without graduation

Open-Ratchet Type Torque Wrench for Piping Work.



QRSP

CAUTION : Use a torque wrench tester for setting torque, or request torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. kg	CAPACITY	
	MIN. ~ MAX.				MIN. ~ MAX.	
	N·m				kgf·cm	
QRSP38N×17	10~45		300.5	0.4	100~450	
QRSP38N×19			303			
QRSP38N×21			306.5			
QRSP38N×24			312			0.43

Note 1 : Please specify model name and required set torque when ordering.

Example QRSP38N×17×40N·m
 QRSP38N×17×400kgf·cm

TORQUE WRENCH

BQSP TORQUE WRENCH



Single purpose
Bi-directional

With ratchet head
Without graduation

Preset Type Torque Wrench for Both Directions with Fixed Ratchet Head.



BQSP

CAUTION : Use a torque wrench tester for setting torque. Otherwise, ask for torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL	CAPACITY	OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	CAPACITY
	MIN. ~ MAX.				MIN. ~ MAX.
BQSP25N3	N·m 5~25	209	9.5	0.20	kgf·cm 50~250
BQSP50N3	10~50				100~500
BQSP100N3	20~100	323.5	12.7	0.63	200~1000
BQSP140N3	40~140				300~1400
BQSP200N3	40~200				400~2000
BQSP280N3	40~280	670.5	19.0	2.4	kgf·m 4~28
BQSP420N	60~420				973

Note 1 : Please specify model name and required set torque when ordering.

Example BQSP50N3×40N·m

BQSP50N3×400kgf·cm

BCSP TORQUE WRENCH



Single purpose
Bi-directional

Interchangeable head
Without graduation

Preset Type Torque Wrench for Both Directions with Interchangeable Head.



BCSP

CAUTION : Use a torque wrench tester for setting torque. Otherwise, ask for torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL	CAPACITY	OVERALL LENGTH mm	TOHNICHI HEAD SIZE	WEIGHT Approx. kg	CAPACITY
	MIN. ~ MAX.				MIN. ~ MAX.
BCSP25N3×10D	N·m 5~25	192	10D	0.20	kgf·cm 50~250
BCSP50N3×12D	10~50				100~500
BCSP50N3×15D	10~50	227.5	15D	0.62	100~500
BCSP100N3×15D	20~100				200~1000
BCSP140N3×15D	40~140				300~1400
BCSP200N3×19D	40~200	430	19D	1.2	400~2000
BCSP280N3×22D	40~280				627
BCSP420N×22D	60~420	927	3.7	6~42	

Note 1 : Overall length is without head.

Note 2 : Interchangeable heads are optional. See page 27-29.

Note 3 : Please specify model name and required set torque when ordering.

Example BCSP50N3×15D×40N·m

BCSP50N3×15D×400kgf·cm

SCSP TORQUE WRENCH

Single purpose
Interchangeable head

Without graduation



Preset Type Torque Wrench for European Type Head.



SCSP

CAUTION : Use a torque wrench tester for setting torque, or request torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL	CAPACITY	HEAD SIZE mm	EFFECTIVE LENGTH mm	OVERALL LENGTH mm	WEIGHT Approx. kg	CAPACITY
	MIN. ~ MAX.					MIN. ~ MAX.
SCSP25N-9×12	N·m 5~25	9×12	175	203	0.15	kgf·cm 50~250
SCSP50N-9×12	10~50					100~500
SCSP100N-9×12	20~100	9×12	266.5	302	0.45	200~1000
SCSP200N-14×18	40~200					14×18

Note 1 : Overall length is without head.

Note 2 : For DIN standard head, not suitable with Tohnichi standard head.

Note 3 : Please specify model name and required set torque when ordering.

Example SCSP50N-9×12×40N·m

SCSP50N-9×12×400kgf·cm

TORQUE WRENCH

SP/RSP TORQUE WRENCH

NEW SP2N×10, SP2N×12



Single purpose
Without graduation

Preset Type Torque Wrench with
Open End/Ring Head for Single
Purpose Bolt Tightening.

Accuracy ±3%



SP Spanner head, preset type



RSP Ring head, preset type

CAUTION : Use a torque wrench tester for setting torque,
or request torque setting when purchasing.

NO.	MODEL (Body Size × Width A.F.)	CAPACITY		HEAD O.W. × THICKNESS mm	WEIGHT Approx. kg	NO.	MODEL (Body Size × Width A.F.)	CAPACITY		HEAD O.W. × THICKNESS mm	WEIGHT Approx. kg
		MIN.	MAX.					MIN.	MAX.		
		N·m						N·m			
1	SP2N×5.5	0.4	2	23 × 5	0.15	65	SP220N×19	45	~220	60 ×15	1.4
2	SP2N×7	1.5	8			66	SP19N×21	3.5	~19	40 × 8	0.2
3	SP8N×7	1.5	8			67	SP67N×21	13	~67	45 ×10	0.5
4	SP2N×8	0.4	2	16 × 9	0.2	68	SP120N×21	24	~120	51 ×11	0.75
5	SP8N×8	1.5	8			69	RSP120N×21	25	~127	28 ×13	0.8
6	RSP8N×8	2	9	31 × 8	0.35	70	SP160N×21	30	~160	52 ×13	0.95
7	RSP19N×8	4	21			71	RSP160N×21	32	~170	35 ×15.5	0.9
8	SP38N×8	8	38	23 × 5	0.15	72	SP38N×22	8	~38	45 × 8	0.35
9	SP8N×9	1.5	8			73	SP67N×22	13	~67	50 ×11	0.5
10	SP38N×9	8	38	31 × 8	0.35	74	SP120N×22	24	~120	51 ×11	0.75
11	SP2N×10	0.4	2	24 ×12	0.2	75	RSP120N×22	25	~127	38 ×13	0.8
12	SP8N×10	1.5	8			76	SP160N×22	30	~160	56 ×13	0.95
13	RSP8N×10	2	9	24 ×15	0.15	77	RSP160N×22	32	~170	35 ×15.5	0.9
14	SP19N×10	3.5	19			78	SP220N×22	45	~220	60 ×15	1.4
15	RSP19N×10	4	21	24 ×20	0.35	79	RSP220N×22	48	~230	40 ×16.5	1.35
16	SP19N×10	3.5	19			80	SP310N×22	65	~310	66 ×16	2
17	SP19N×10	3.5	19	24 ×15	0.15	81	SP120N×23	24	~120	51 ×11	0.75
18	SP19N×10	3.5	19			82	SP8N×24	1.5	8	37 × 8	0.15
19	SP38N×10	8	38	30 × 6.5	0.2	83	SP38N×24	8	~38	45 × 8	0.35
20	RSP38N×10	9	42			21.5×10	84	SP67N×24	13	~67	50 ×11
21	SP38N×10	8	38	24 ×12	0.35	85	SP120N×24	24	~120	51 ×11	0.75
22	SP38N×10	8	38			24 ×20	86	SP160N×24	30	~160	56 ×13
23	SP38N×10	8	38	24 ×15	0.35	87	RSP160N×24	32	~170	35 ×15.5	0.9
24	SP2N×12	0.4	2	25 × 5.5	0.15	88	SP220N×24	45	~220	60 ×15	1.4
25	SP8N×12	1.5	8			89	RSP220N×24	48	~230	40 ×16.5	1.35
26	SP19N×12	3.5	19	30 × 6.5	0.2	90	SP310N×24	65	~310	66 ×16	2
27	SP38N×12	8	38			35 × 8	91	RSP310N×24	68	~320	45 ×18
28	RSP38N×12	9	42	21.5×10	0.35	92	SP160N×26	30	~160	56 ×13	0.95
29	SP2N×13	0.4	2	25 × 5.5	0.15	93	SP8N×27	1.5	8	37 × 8	0.15
30	SP19N×13	3.5	19			30 × 6.5	94	SP38N×27	8	~38	45 × 8
31	RSP19N×13	4	21	22 × 9	0.2	95	SP67N×27	13	~67	50 ×11	0.5
32	SP38N×13	8	38			35 × 8	96	SP120N×27	24	~120	60 ×15
33	RSP38N×13	9	42	21.5×10	0.35	97	SP160N×27	30	~160	56 ×13	0.95
34	SP19N×14	3.5	19	30 × 6.5	0.2	98	SP220N×27	45	~220	60 ×15	1.4
35	SP38N×14	8	38			35 × 8	99	RSP220N×27	48	~230	40 ×16.5
36	RSP38N×14	9	42	21.5×10	0.35	100	SP310N×27	65	~310	72 ×16	2
37	SP67N×14	13	~67	45 ×10	0.5	101	RSP310N×27	68	~320	45 ×18	2
38	RSP67N×14	14	~73	25.5×12	0.45	102	SP420N×27	90	~420	73 ×18	3.3
39	SP120N×14	24	~120	45 ×11	0.75	103	SP67N×29	13	~67	59.5×11	0.5
40	SP38N×16	8	38	38 × 8	0.35	104	SP220N×29	45	~220	65 ×15	1.4
41	RSP38N×16	9	42	32 ×10	0.35	105	SP67N×30	13	~67	59.5×11	0.5
42	SP67N×16	13	~67	45 ×10	0.5	106	SP120N×30	24	~120	60 ×15	0.75
43	RSP67N×16	14	~73	25.5×12	0.45	107	SP220N×30	45	~220	72 ×15	1.4
44	SP2N×17	0.4	2	37 × 8	0.15	108	SP310N×30	65	~310	72 ×16	2
45	SP19N×17	3.5	19			40 × 8	109	RSP310N×30	68	~320	45 ×18
46	SP38N×17	8	38	38 × 8	0.35	110	SP420N×30	90	~420	78 ×18	3.3
47	RSP38N×17	9	42	32 ×10	0.35	111	SP560N×30	130	~560	82 ×19	4
48	SP67N×17	13	~67	45 ×10	0.5	112	SP67N×32	13	~67	59.5×11	0.5
49	RSP67N×17	14	~73	25.5×12	0.45	113	SP220N×32	45	~220	72 ×16	1.4
50	SP120N×17	24	~120	45 ×11	0.75	114	SP310N×32	65	~310	72 ×16	2
51	RSP120N×17	25	~127	28 ×13	0.8	115	SP420N×32	90	~420	78 ×18	3.3
52	SP67N×18	13	~67	45 ×10	0.5	116	SP560N×32	130	~560	82 ×19	4
53	RSP67N×18	14	~73	34 ×12	0.45	117	SP67N×33.3	13	~67	59.5×11	0.5
54	SP120N×18	24	~120	51 ×11	0.75	118	SP220N×34	45	~220	72 ×15	1.4
55	RSP120N×18	25	~127	28 ×13	0.8	119	SP420N×34	90	~420	78 ×18	3.3
56	SP2N×19	0.4	2	37 × 8	0.15	120	SP420N×35	90	~420	78 ×18	3.3
57	SP8N×19	1.5	8			121	SP220N×36	45	~220	72 ×15	1.4
58	SP38N×19	8	38	45 × 8	0.35	122	SP420N×36	90	~420	78 ×18	3.3
59	SP67N×19	13	~67	45 ×10	0.5	123	SP560N×36	130	~560	88 ×19	4
60	RSP67N×19	14	~73	34 ×12	0.45	124	SP160N×41	30	~160	80 ×15	0.95
61	SP120N×19	24	~120	51 ×11	0.75	125	SP310N×41	65	~310	85 ×16	2
62	RSP120N×19	25	~127	28 ×13	0.8	126	SP310N×46	65	~310	93 ×15	2
63	SP160N×19	30	~160	52 ×13	0.95	127	SP560N×46	130	~560	110 ×19.5	4.5
64	RSP160N×19	32	~170	35 ×15.5	0.9	128	SP560N×55	130	~560	110 ×19.5	4.5

Note 1 : Tolerance of width accross flat is based upon JIS B4650.

Note 2 : Please specify model name and required set torque when ordering.

Example SP38N×10×30N·m

SP38N×10×300kgf·cm

QSPLS/CSPLS QRSPLS/SPLS/RSPLS

With limit switch Single purpose
Without graduation

TORQUE WRENCH

Preset Type Torque Wrench with Limit Switch.



SPLS

LIMIT SWITCH SPEC.
AC30V Below 1A
DC30V Below 1A

CAUTION : Use a torque wrench tester for setting torque, or request torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL
QSPLS12N
QSPLS25N3
QSPLS50N3
QSPLS100N3
QSPLS140N3
QSPLS200N3
QSPLS280N3
QSPLS420N

MODEL
CSPLS12N×8D
CSPLS25N3×10D
CSPLS50N3×12D
CSPLS100N3×15D
CSPLS140N3×15D
CSPLS200N3×19D
CSPLS280N3×22D
CSPLS420N×22D

MODEL (BODY SIZE × WIDTH)
QRSPLS38N×17
QRSPLS38N×19
QRSPLS38N×21
QRSPLS38N×24

MODEL (BODY SIZE × WIDTH)
SPLS8N×7
SPLS8N×8
SPLS8N×9
SPLS8N×10
SPLS8N×12
SPLS19N×10
SPLS19N×12
SPLS19N×13
SPLS19N×14
SPLS19N×17
SPLS19N×21
SPLS19N-1×10
SPLS19N-2×10
SPLS19N-3×10
SPLS38N×8
SPLS38N×9
SPLS38N×10
SPLS38N×12
SPLS38N×13
SPLS38N×14
SPLS38N×16
SPLS38N×17
SPLS38N×19
SPLS38N×22
SPLS38N×24
SPLS38N×27
SPLS38N-1×10
SPLS38N-2×10
SPLS38N-3×10
SPLS67N×14
SPLS67N×16
SPLS67N×17
SPLS67N×18
SPLS67N×19
SPLS67N×21
SPLS67N×22
SPLS67N×24
SPLS67N×27
SPLS67N×29
SPLS67N×30
SPLS67N×32
SPLS67N×33.3

MODEL (BODY SIZE × WIDTH)
SPLS120N×14
SPLS120N×17
SPLS120N×18
SPLS120N×19
SPLS120N×21
SPLS120N×22
SPLS120N×23
SPLS120N×24
SPLS160N×19
SPLS160N×21
SPLS160N×22
SPLS160N×24
SPLS160N×26
SPLS160N×27
SPLS220N×19
SPLS220N×22
SPLS220N×24
SPLS220N×27
SPLS220N×29
SPLS220N×30
SPLS220N×32
SPLS220N×34
SPLS220N×36
SPLS310N×22
SPLS310N×24
SPLS310N×27
SPLS310N×30
SPLS310N×32
SPLS310N×41
SPLS310N×46

MODEL (BODY SIZE × WIDTH)
RSPLS8N×8
RSPLS8N×10
RSPLS19N×8
RSPLS19N×10
RSPLS19N×13
RSPLS38N×10
RSPLS38N×12
RSPLS38N×13
RSPLS38N×14
RSPLS38N×17
RSPLS67N×14
RSPLS67N×17
RSPLS67N×19
RSPLS120N×17
RSPLS120N×19
RSPLS120N×22
RSPLS160N×19
RSPLS160N×22
RSPLS160N×24
RSPLS160N×27
RSPLS220N×22
RSPLS220N×27
RSPLS220N×30
RSPLS220N×32
RSPLS220N×27
RSPLS310N×24
RSPLS310N×27
RSPLS310N×30
RSPLS310N×32
RSPLS310N×41
RSPLS310N×30

Note 1 : For specifications, refer to QSP, CSP, QRSP, SP and RSP model series information.

Note 2 : Limit switch can be installed on other click type torque wrenches.

Note 3 : Connecting to CNA-4mk2, Tohnichi Count Checker, tightening verification system can be more effective.

Note 4 : Please specify model name and required set torque when ordering.

Example QSPLS50N×40N·m

QSPLS50N×400kgf·cm

Accessories : WA5219K, Female Connector CNA-4, Connt Checker

TORQUE WRENCH

SP-N TORQUE WRENCH

Without graduation Single purpose



Preset Type Torque Wrench with Notched Open End Head, Allowing Rapid Tightening with Less Movement.



LIMIT SWITCH SPEC.
AC30V Below 1A
DC30V Below 1A

CAUTION : Use a torque wrench tester for setting torque, or request torque setting when purchasing.

Accuracy $\pm 3\%$

MODEL (BODY SIZE × WIDTH)	CAPACITY		HEAD O.W. × THICKNESS mm	OVERALL LENGTH mm	WEIGHT Approx. kg	CAPACITY	
	MIN. ~ MAX.	N·m				MIN. ~ MAX.	kgf·cm
SP19N-1×10N	3.5~19	N·m	24×12	215	0.2	35~190	kgf·cm
SP19N-3×10N			24×15				
SP19N-4×10N			24×10				
SP19N-5×10N			24×15				
SP19N-9×10N			24.5×10 (4/6)				
SP38N×14N	8 ~ 3.8		35×8	253.5	0.35	80~380	
SPLS19N-1×10N	3.5~19	N·m	24×12	215	0.3	35~190	kgf·cm
SPLS19N-3×10N			24×15				
SPLS19N-4×10N			24×10				
SPLS19N-5×10N			24×15				
SPLS19N-8×10N			24×12				
SPLS19N-9×10N			24.5×10 (4/6)				

Note 1 : SPLS19N-8×10N model is with a long cord.

Note 2 : Please specify model name and required set torque when ordering.

Example SPLS19N-1×10×10N·m

SPLS19N-1×10×100kgf·cm

TORQUE WRENCH

DB/DBE TORQUE WRENCH



Dial Indicating Torque Wrench.
Suitable for Easy and Accurate Torque Measurements in Various Inspection
and Tightening Application.



Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
DB1.5N-S	0.2~ 1.5	0.02	225	6.35	0.3	15DB3-S	2~ 15	0.2
DB3N-S	0.3~ 3	0.05				30DB3-S	3~ 30	0.5
DB6N-S	0.6~ 6	0.1	230	6.35	0.4	60DB3-S	6~ 60	1
DB12N-S	1 ~ 12	0.2				120DB3-S	10~ 120	2
DB25N-S	3 ~ 25	0.5	245	9.5	0.6	230DB3-S	30~ 230	5
DB50N-S	5 ~ 50		320			450DB3-S	50~ 450	
DB100N-S	10 ~ 100	1	400	12.7	0.7	900DB3-S	100~ 900	10
DB200N-S	20 ~ 200	2	500			1800DB3-S	200~1800	20
DB280N-S	30 ~ 280	5	690	19.0	1.65	2800DB3-S	3~ 28	0.5
DB420N-S	40 ~ 420		890			4200DB2-S	4~ 42	
DBE560N-S	50 ~ 560	10	1100	25.4	4	5600DBE2-S	5~ 56	1
DBE700N-S	70 ~ 700		1260			7000DBE2-S	7~ 70	
DBE850N-S	100 ~ 850	20	1360	38.1	6.1	8500DBE2-S	10~ 85	5
DBE1000N-S	100 ~1000		1490			10000DBE2-S	10~ 100	
DBE1400N-S	200 ~1400	50	1740	44.5	8.6	14000DBE2-S	20~ 140	2
DBE2100N-S	200 ~2100		2140			21000DBE2-S	20~ 210	
DBE2800N-S	300 ~2800	50	2380	44.5	16.8	28000DBE2-S	30~ 280	5
DBR4500N-S	500 ~4500		1285			45000DBR-S	50~ 450	
DBR6000N-S	600 ~6000		1585		25.5	60000DBR-S	60~ 600	

Note 1 : DBR models are supplied on request.
Note 2 : Without memory pointer models are available.
Remove "-S" from model name, for example DB100N.
Note 3 : E-type models are with an extension bar handle.

CDB-S TORQUE WRENCH



Dial Indicating with
Interchangeable Head.



Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNIKI HEAD SIZE	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
CDB7N×8D-S	0.7~ 7	0.1	227	8D	0.42	70CDB-S	7~ 70	1
CDB14N×8D-S	2 ~ 14	0.2				140CDB-S	20~ 140	2
CDB25N×10D-S	3 ~ 25	0.5	255	10D	0.48	250CDB-S	30~ 250	5
CDB50N×12D-S	5 ~ 50		329.5	12D	0.53	500CDB-S	50~ 500	
CDB100N×15D-S	10 ~100	1	412.5	15D	0.76	1000CDB-S	100~1000	10
CDB200N×19D-S	20 ~200	2	519.5	19D	1	2000CDB-S	200~2000	20
CDB300N×22D-S	30 ~300	5	717.5	22D	1.65	3000CDB-S	3~ 30	0.5
CDB420N×22D-S	40 ~420					918	4200CDB-S	

Note 1 : Overall length is without head.
Note 2 : Interchangeable head are sold separately. See page 27-29.
Note 3 : PH interchangeable heads can not be used with this series.

T-S TORQUE WRENCH



Dial Indicating Torque
Wrench with Dual Gripped
T-Handle.



Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	NECK LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.						MIN. ~ MAX.	GRAD.
T23N-S	3~ 23	0.5	205	71	9.5	0.41	230T-S	30~ 230	5
T45N-S	5~ 45		261	82			450T-S	50~ 450	
T90N-S	10~ 90	1	376	102.5	12.7	0.8	900T-S	100~ 900	10
T180N-S	20~ 180	2	656	118.5			1800T-S	200~1800	20
T700N-S	70~ 700	10	1300	19.0	4	7000T-S	7~ 70	1	
T1000N-S	100~1000		1630				10000T-S		10~ 100
T1400N-S	200~1400	20	1880	25.4	6.2	14000T-S	20~ 140	2	
T2100N-S	200~2100		2500			21000T-S	20~ 210		
T2800N-S	300~2800	50	2960	38.1	15.5	28000T-S	30~ 280	5	
T4200N-S	400~4200		3660			42000T-S	40~ 420		

Note 1 : T700N-S ~ T4200N-S models are supplied on request.
Note 2 : Without memory pointer models are available.
Remove "-S" from model name for example T90N.

TORQUE WRENCH

SF/F/FR TORQUE WRENCH

Beam Type Torque Wrench for Tightening and Inspection.



Direct reading
For inspection
Beam



SF



F

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
SF40CN	cN·m 8 ~ 40	2	110		0.04	4SF	kgf·cm 0.8 ~ 4	0.2
SF70CN	10 ~ 70		130			7SF	1 ~ 7	
SF1.5N	N·m 0.2 ~ 1.5	0.05	140	6.35	0.07	15SF	2 ~ 15	0.5
SF3N	0.5 ~ 3	0.1	170			30SF	5 ~ 30	1
SF6N	0.6 ~ 6	0.2	200	9.5	0.25	60SF	6 ~ 60	2
SF12N	2 ~ 12	0.5	225			120SF	20 ~ 120	5
F23N	3 ~ 23		295	230F	30 ~ 230			
F46N	5 ~ 46	1	355	12.7	0.95	460F	50 ~ 460	10
F92N	10 ~ 92	2	400			920F	100 ~ 920	20
F130N	20 ~ 130		445	1300F	200 ~ 1300			
F190N	30 ~ 190	490	1900F	300 ~ 1900	50			
F280N	50 ~ 280	5	565	19.0	2.2	2800F	kgf·m 5 ~ 28	0.5
F420N	70 ~ 420		820			4200F	7 ~ 42	
F560N	100 ~ 560	10	945	25.4	4.0	5600F	10 ~ 56	1
F700N	100 ~ 700		1175			7000F	10 ~ 70	
F850N	100 ~ 850	20	1410	38.1	7.8	8500F	10 ~ 85	2
F1000N	100 ~ 1000		1640			10000F	10 ~ 100	
FR1050N	100 ~ 1050	50	835	5	8	10500FR	10 ~ 105	5
FR1400N	200 ~ 1400		981			14000FR	20 ~ 140	
FR2100N	300 ~ 2100	100	1148	30 ~ 210	14.5	21000FR	30 ~ 210	5
FR2800N	300 ~ 2800		1292			28000FR	30 ~ 280	
FR4200N	400 ~ 4200	100	1460	60 ~ 600	28	42000FR	40 ~ 420	10
FR6000N	600 ~ 6000		1624			60000FR	60 ~ 600	

Note 1 : FR models are supplied on request.

Note 2 : FR require a winch or mechanical device for loading.

CSF/CF TORQUE WRENCH

Beam Type Torque Wrench with Interchangeable Head.

Direct reading
For inspection
Beam
Interchangeable head



CSF



CF

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	TOHNIKI HEAD SIZE	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
CSF7N×8D	N·m 1 ~ 7	N·m 0.2	215	8D	0.2	70CSF	kgf·cm 10 ~ 70	2
CSF14N×8D	2 ~ 14	0.5	240			140CSF	20 ~ 140	5
CF25N×10D	5 ~ 25	1	320	10D	0.4	250CF	50 ~ 250	10
CF50N×12D	10 ~ 50	2	380	12D	0.6	500CF	100 ~ 500	20
CF100N×15D	10 ~ 100		430	15D	1.0	1000CF	100 ~ 1000	
CF150N×19D	20 ~ 150	5	480	19D	1.3	1500CF	200 ~ 1500	0.5
CF230N×22D	30 ~ 230		525	22D	1.6	2300CF	3 ~ 23	
CF420N×22D	70 ~ 420	10	715	32D	3.1	4200CF	7 ~ 42	1
CF850N×32D	100 ~ 850	20	1260		7.1	8500CF	10 ~ 85	2

Note 1 : Overall length is without head.

Note 2 : Interchangeable head are sold separately. See page 27-29.

Note 3 : PH interchangeable heads can not be used with this series.

QF/QFR TORQUE WRENCH

Beam Type Torque Wrench with Fixed Ratchet Head.

Direct reading
For inspection
Beam
With ratchet head



QF

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
QF60N	N·m 6 ~ 60	N·m 1	455	9.5	0.8	600QF	kgf·cm 60 ~ 600	10
QF120N	10 ~ 120	2	515			1200QF	100 ~ 1200	20
QF220N	30 ~ 220	5	580	12.7	1.8	2200QF	300 ~ 2200	50
QF320N	40 ~ 320		655			3200QF	400 ~ 3200	
QF420N	70 ~ 420	10	830	19.0	3.4	4200QF	kgf·m 7 ~ 42	0.5
QF560N	100 ~ 560		950			5600QF	100 ~ 56	
QF700N	100 ~ 700	20	1165	25.4	6.5	7000QF	10 ~ 70	1
QFR850N	100 ~ 850		1400			8500QFR	10 ~ 85	
QFR1050N	100 ~ 1050	50	845	38.1	8.5	10500QFR	10 ~ 105	2
QFR1400N	200 ~ 1400		992			14000QFR	20 ~ 140	
QFR2100N	300 ~ 2100	100	1158	30 ~ 210	15.5	21000QFR	30 ~ 210	5
QFR2800N	300 ~ 2800		1305			28000QFR	30 ~ 280	
QFR4200N	400 ~ 4200	100	1473	60 ~ 600	21	42000QFR	40 ~ 420	10
QFR6000N	600 ~ 6000		1624			60000QFR	60 ~ 600	

Note 1 : QFR is supplied on request.

Note 2 : QFR require a winch or mechanical device for loading.

TORQUE WRENCH

CEM3 DATA TORK



Easy to read Dual Displays (LED and LCD)
Up to 999 Measured Data Storage



CEM100N3×15D

Accuracy ± 1%+ 1digit

MODEL	CAPACITY		-M (Metric Model)				-A (English Model)				OVERALL LENGTH	INTERCHANGEABLE HEAD OPTION TOHNICHI HEAD SIZE	WEIGHT Approx. kg	REFERENCE PREVIOUS MODEL	CAPACITY	
			CAPACITY		CAPACITY		CAPACITY		CAPACITY						MIN.~MAX.	1 digit
	MIN.~MAX.	1 digit	MIN.~MAX.	1 digit	MIN.~MAX.	1 digit	MIN.~MAX.	1 digit	MIN.~MAX.	1 digit					mm	kg
CEM10N3×8D	N·m 2~10	N·m 0.01	kgf·cm 20~100	kgf·cm 0.1	kgf·cm	kgf·cm	lbf·in 20~90	lbf·in 0.1	lbf·ft	lbf·ft	212	8D	0.46	CEM9N2×8D	N·m 1.8~9	N·m 0.01
CEM20N3×10D	4~20	0.02	40~200	0.2			36~180	0.2			214	10D	0.47	CEM18N2×10D	3.6~18	0.02
CEM50N3×12D	10~50	0.05	100~500	0.5			100~450	0.5			282	12D	0.58	CEM45N2×12D	9~45	0.05
CEM100N3×15D	20~100	0.1	200~1000	1			200~900	1	15~75	0.1	684	15D	0.63	CEM90N2×15D	18~90	0.1
CEM200N3×19D	40~200	0.2	400~2000	2					30~150	0.2	475	19D	0.78	CEM180N2×19D	36~180	0.2
CEM360N3×22D	70~360	0.4	720~3600	4					52~260	0.4	713	22D	1.13	CEM360N2×22D	72~360	0.4
CEM500N3×22D	100~500	0.5	kgf·m 10~50	kgf·m 0.05	10~50	0.05			72~360	0.5	949	22D	4	CEM500N2×22D	100~500	1
CEM850N3×32D	170~850	1	17~85	0.1	17~85	0.1			124~620	1	1387	32D	5.14	CEM850N2×32D	170~850	1

Note : Metric model is named "-M", e.g. CEM10N3×8D-M for 20-100kgf·cm
English model is named "-A", e.g. CEM20N3×10D-A for 36-180lbf·in

CEM3 OPTION

BATTERY PACK

MODEL	DESCRIPTION
BP-5	

PRINTER.....P.41

MODEL	DESCRIPTION
EPP16M2	

SOFTWARE.....P.41

MODEL	DESCRIPTION
DFS	

BATTERY CHARGER

MODEL	DESCRIPTION	MODEL	DESCRIPTION
BC-3-100	110V	BC-3-200	220V

CONNECTING CABLE

MODEL	DESCRIPTION
③79	CEM2, CEM3, R-DT999→EPP16M2
⑤75	CEM2, CEM3, R-DT999→PC (D-SUB 9 pins Female)
⑤84	CEM3, R-DT999→PC (USB A Connector)

DISPLAY (Torque value) (Counter)	7 segments LED 4 lines 14 segments LCD 3 lines
DIGIT HEIGHT (Torque value) (Counter)	10mm for LED 14 segments 7mm, 7 segments 3mm for LCD
NUMBER OF DATA MEMORY	999 (99 for CEM2 mode)
BASIC FUNCTION	Peak hold Peak data Memory Run Mode Auto Memory & Resetting Auto Zero setting Auto Off (3 min) Over Torque Alarm Clock
COMMUNICATION FUNCTIONS	RS232C (2400-19200bps) Serial output corresponding to a USB connector
BATTERY LIFE INDICATOR	Available
POWER SUPPLY	Ni-MH rechargeable battery
CONTINUOUS USE	Approx. 20 hours with fully charged (8 hours by 1 hour recharging)
RECHARGING TIME	Approx. 3.5 hours
TEMPERATURE IN USE	0~40 degree

CTB DIGITAL RETIGHTENING WRENCH



Digital Torque Wrench for Re-Start Torque Method.



CTB

CTBE

Accuracy ± 1%+ 1digit

MODEL	EFFECTIVE LENGTH mm	OVERALL LENGTH mm	WEIGHT Approx. kg	TOHNICHI HEAD SIZE	CAPACITY									
					N.M		KGF.CM		LBF.IN		LBF.FT			
					MIN.-MAX.	1 DIGIT	MIN.-MAX.	1 DIGIT	MIN.-MAX.	1 DIGIT	MIN.-MAX.	1 DIGIT		
CTB20×10D	231	295	0.6	10D	4~20	0.02	40~200	0.2	36~180	0.2				
CTB50×12D	319	360	0.7	12D	10~50	0.05	100~500	0.5	100~450	0.5				
CTB100×15D	409	433	0.8	15D	20~100	0.1	200~1000	1	200~900	1			15~75	0.1
CTB200×19D	489	500	1.1	19D	40~200	0.2	400~2000	2					30~150	0.2
CTB360×22D	749	743	1.6	22D	72~360	0.4	720~3600	4					52~260	0.4
CTBE500×22D	917	912	3.5	22D	100~500	0.5	100~5000	5					72~360	0.5
CTBE850×32D	1370	1383	4.9	32D	170~850	1	1700~8500	10					124~620	1

MEASUREMENT DIRECTION	Clockwise Only
DISPLAY	LCD Display, Counter : 3mm and torque : 7mm
DATA MEMORY	50 data
ARITHMETIC FUNCTION	Sampling, Maximum, Minimum and Means
MEASUREMENT METHOD	PEAK/RUN
DATA OUTPUT	RS232C, I/F infrared ray
ZERO ADJUSTMENT	Auto zero
OTHER FUNCTION	Auto-power off and auto-memory, Battery Check
POWER SOURCE	Ni-Cd battery
CONTINUOUS USE	8 hours
BATTERY CHARGE	1 hour
OPERATING CONDITION	0~40°C

CTA/CTB OPTION

BATTERY PACK

MODEL	DESCRIPTION
BP-3	

PRINTER.....P.41

MODEL	DESCRIPTION
EPP16M2	

SOFTWARE.....P.41

MODEL	DESCRIPTION
DFS	

AC ADAPTER

MODEL	DESCRIPTION	MODEL	DESCRIPTION
QC-1	AC adapter, 110V	QC-2	AC adapter, 220V

CONNECTING CABLE

MODEL	DESCRIPTION
③78	CTA/CTB to EPP16M2
⑤79	CTA/CTB to PC, D-SUB 9 pins Female

Note 1 : Overall length is without head.

Note 2 : QH head is provided. Other interchangeable heads are sold separately.

Note 3 : PH interchangeable heads can not be used with this series.

Note 4 : AC adapter is included for charging the unit.

Note 5 : For data transfer by infrared, use R-DT100-3, Data Tank. See page 41.

Note 6 : Please specify desired scale, S.I., Metric or Imperial, when ordering.

Note 7 : Statistic data processing can be done by DFS.

TORQUE WRENCH

CTA/CTA-P DIGITAL TORQUE AND ANGLE WRENCH



Digital display
Interchangeable head
Battery

Torque and Angle can be Set and Verified on Display.



CTA



CTA-E

CTA

Accuracy $\pm 1\% + 1$ digit

CTA-P

MODEL	ANGLE MEASURING RANGE		ANGLE ACCURACY	OVERALL LENGTH mm	WEIGHT Approx. kg	TOHNICHI HEAD SIZE	CAPACITY								MODEL	
	MIN.-MAX.	1 DIGIT					N.M		KGF.CM		LBF.IN		LBF.FT			
							MIN.-MAX.	1 DIGIT	MIN.-MAX.	1 DIGIT	MIN.-MAX.	1 DIGIT	MIN.-MAX.	1 DIGIT		
CTA50×12D			$\pm 2^\circ + 1$ digit Angular Velocity is 30°/s ~180°/s when the bolt is turned to 90°	360	0.7	12D	(2.5)	10~50	0.05	100~500	0.5	100~450	0.5			CTA50×12D-P
CTA100×15D				433	0.8	15D	(5)	20~100	0.1	200~1000	1	200~900	1			CTA100×15D-P
CTA200×19D	0~999°	1°		500	1.1	19D	(10)	40~200	0.2	400~2000	2			15~75	0.1	CTA200×19D-P
CTA360×22D				743	1.6	22D	(18)	72~360	0.4	720~3600	4			52~260	0.4	CTA360×22D-P
CTAE500×22D				912	3.5	22D	(25)	100~500	0.5	100~5000	5			72~360	0.5	CTAE500×22D-P
CTAE850×32D			1383	4.9	32D	(43)	170~850	1	1700~8500	10			124~620	1	CTAE850×32D-P	

MEASUREMENT DIRECTION	Clockwise Only
DISPLAY	LCD Display, Counter : 3mm and Angle/Torque : 7mm
DATA MEMORY	TORQUE and ANGLE
MEASUREMENT METHOD	PEAK/RUN on both angle and torque measurement
DATA OUTPUT	RS232C, I/F infrared ray
ZERO ADJUSTMENT	Auto zero function on both angle and torque measurement
OTHER FUNCTION	Auto-power off and auto-memory, Battery Check
POWER SOURCE	Ni-Cd battery
CONTINUOUS USE	8 hours
BATTERY CHARGE	1 hour
OPERATING CONDITION	0~40°C

MEASUREMENT DIRECTION	Clockwise Only
DISPLAY	LCD Display, Counter : 3mm and Angle/Torque : 7mm
DATA MEMORY	Tightening Torque, primary Angle, Secondary Angle, tertiary Angle and final Torque.
MEASUREMENT METHOD	PEAK/RUN on both angle and torque value
DATA OUTPUT	RS232C, I/F infrared ray
ZERO ADJUSTMENT	Auto zero function on both angle and torque measurement
OTHER FUNCTION	Auto-power off, battery check
POWER SOURCE	Ni-Cd battery
CONTINUOUS USE	8 hours
BATTERY CHARGE	1 hour
OPERATING CONDITION	0~40°C

Note 1 : The number in parenthesis is the possible lowest setting snug torque value, not guaranteed 3% accuracy.

Note 2 : Overall length is without head.

Note 3 : QH head is provided. Other interchangeable heads are sold separately.

Note 4 : PH interchangeable heads can not be used with this series.

Note 5 : Refer page 24 for CTA optional accessories.

Note 6 : Please specify desired scale, S.I., Metric or Imperial, when ordering.

BATTERY PACK

MODEL	DESCRIPTION
BP-3	

PRINTER

MODEL	DESCRIPTION
EPP16M2	

CONNECTING CABLE

MODEL	DESCRIPTION
(378)	CTA/CTA-P/CTB to EPP16M2
(579)	CTA/CTB to PC (D-SUB 9 pins Female)
(583)	CTA-P to PC (D-SUB 9 pins Female)

WQL TORQUE WRENCH

Adjustable type
With graduation
With ratchet head



Adjustable Type Torque Wrench for Angle Method Tightening. Snug Torque and Angle can be Set with Scale.



WQL

Accuracy $\pm 3\%$

MODEL	Angle Scale		CAPACITY		OVERALL LENGTH mm	SQUARE DRIVE mm	MODEL Metric	CAPACITY	
	MAX. READING	GRAD.	MIN. ~ MAX.	GRAD.				MIN. ~ MAX.	GRAD.
WQL50N	360°	2°	N·m (5) 10~50	N·m 0.5	260	9.5	450WQL3	kgf·cm (50) 100~500	kgf·cm 5
WQL100N			(10) 20~100	1	345		900WQL3	(100) 200~1000	10
WQL200N			(30) 40~200		495	12.7	1800WQL3	(300) 400~2000	20
WQL280N			(30) 40~280	2	695	19.0	2800WQL3	kgf·m (3) 4~28	kgf·m 0.2
WQL420N	(40) 60~420	3	975		4200WQL2	(4) 6~42	0.3		

Note 1 : The number in parenthesis is the possible lowest setting snug torque value, not guaranteed 3% accuracy.

SCDB-S TORQUE WRENCH

Direct reading
For inspection
Dial
Interchangeable head



Dial Indicating Wrench for European Type Head.



SCDB

Accuracy $\pm 3\%$

MODEL	CAPACITY		HEAD SIZE mm	EFFECTIVE LENGTH mm	OVERALL LENGTH mm	WEIGHT Approx. kg
	MIN. ~ MAX.	GRAD.				
SCDB25N-9×12-S	N·m 3~25	0.5	9×12	260	271	0.48
SCDB50N-9×12-S	5~50		9×12	300	342	0.53
SCDB100N-9×12-S	10~100	1	9×12	370	422	0.76
SCDB200N-14×18-S	20~200	2	14×18	490	535	1

Note 1 : Overall length is without head.

Note 2 : For DIN standard head, not suitable with Tohnichi standard head.

AUXILIARY TOOLS

To facilitate the proper use of Tohnichi products, we have prepared a number of auxiliary parts and special tools. (Some tools are already provided with the necessary auxiliary parts.) We are ready to manufacture custom-made parts and tools to meet your requirements. Please contact us.

SPECIAL TOOL FOR TORQUE WRENCHES

QLE ADJUSTING TOOL

This tool is used to set the torque of the large QLE adjustable wrenches.



CATALOG NO.	APPLICABLE MODEL
301	QLE550N~2100N

SP THRUSTRING TOOL

This tool is used to set the torque of preset types SP, RSP, QSP and CSP torque wrenches.



CATALOG NO.	TOOL No.	APPLICABLE MODEL
310	A-1	QSP1.5N~QSP6N/CSP SP2N~SP19N
311	A-2	QSP12N/CSP BQSP25N/BCSP
312	A-3	SP38N,SP67N BQSP50N~BQSP140N/BCSP
313	A-4	SP120N~SP310N BQSP200N,BQSP280N/BCSP
314	A-5	QSP420N/CSP BQSP420N/BCSP
315	A-6	SP420N,SP560N

QSP3 ADJUSTING TOOL



CATALOG NO.	POINT SHAPE HEX×BORE×DEPTH	APPLICABLE MODEL
931	2.5×1.5×6	QSP25N3 QSP25N3×10D
930	4×2.5×8	QSP50N3,QSP100N3,QSP140N3, QSP200N3,QSP280N3 CSP50N3×12D,CSP50N3×15D, CSP100N3×15D,CSP140N3×15D, CSP200N3×19D,CSP280N3×22D

DB ADJUSTING SET

This set of pliers is used to adjust the torque for dial type torque wrenches and torque checkers.



CATALOG NO.	APPLICABLE MODEL
316	DB,DBE,DOT

CARRYING CASE

One torque wrench and sockets can be stored.



CATALOG NO.	DIMENSION (mm)	WEIGHT APPROX.(kg)	APPLICABLE MODEL
840	H91×W429×D120	0.5	QL25N~QL140N PQL25N~PQL140N MTQL70N,MTQL140N DB25N~DB100N 5 pcs. of sockets(below W19)
842	H60×W400×D70	0.25	QL, QL-MH, PQL50N CL50N×12D, CL50N×15D CL50N×12D-MH, CL50N×15D-MH MTQL70N, MTQL140N
843	H80×W520×D80	0.36	QL200N, QL200N-MH DQL200N

SPECIAL TOOL FOR TORQUE DRIVERS

LTD,RTD ADJUSTING TOOL

This tool is used to adjust the torque of the LTD and RTD torque drivers.



CATALOG NO.	APPLICABLE MODEL
51	LTD/RTD15, 30CN
46	LTD/RTD60CN, LTD/RTD 120CN
47	LTD/RTD260CN
48	LTD/RTD500CN
49	LTD1000CN

LTD AUXILIARY TIGHTENING TOOL

This tool makes tightening with the large LTD tool much easier.



CATALOG NO.	APPLICABLE MODEL
31	LTD500CN/RTD/NTD/RNTD FTD400CN
32	LTD1000CN/NTD FTD8N,16N
40	LTD2000CN

LTD,RTD PRESET HOOK SPANNER

This tool makes it easier to set the torque for mid to large capacity LTD and RTD drivers.



CATALOG NO.	APPLICABLE MODEL
52	LTD/RTD260CN
53	LTD/RTD500CN
54	LTD1000CN
55	LTD2000CN

NTD,RNTD TORQUE ADJUSTING BAR

This tool is used to set the torque of preset types NTD and RNTD drivers.



CATALOG NO.	APPLICABLE MODEL
42	NTD15CN~120CN/RNTD
43	NTD260CN/RNTD
44	NTD500CN~1000CN/RNTD

TORQUE DRIVER ADAPTER

This accessory is used with TME and TM torque meters to test UNI-TORKS and torque drivers.



CATALOG NO.	APPLICABLE MODEL
30	LTD/RTD/NTD/RNTD FTD50CN~400CN

EVERTORQUE

LUBRICANT FOR REPAIRING TORQUE PRODUCTS

MODEL	CATALOG NO.
EVERTORQUE	830

ADAPTABLE MODEL FOR EVERTORQUE

	APPLICABLE MODEL	APPLICABLE POINT
CLICK TYPE TORQUE WRENCH (WITH MEMORY POINTER)	QL/OLE,CL/CLE PQL,PCL,YCL	THRUST RING : STEEL BALL SCALE PIECE, ADJUSTING SCREW : SCREW
	WQL	THRUST RING : STEEL BALL SCALE PIECE, ADJUSTING SCREW : SCREW KNOB, PROTECTOR : JOINT POINT
CLICK TYPE TORQUE DRIVER	MPQL	THRUST RING : STEEL BALL SCALE PIECE, ADJUSTING SCREW : SCREW RATCHET, MARKER PIPE : JOINT POINT
	RTD,RNTD RTD,LTD,BMLD	MAIN SHAFT, TOGGLE SHEET : SERRATION PART CASE, SCALE PIECE : SCREW

INTERCHANGEABLE HEAD

SH OPEN SPANNER HEAD



MODEL (Head Size × Width)	ALLOWABLE TORQUE	OUTSIDE WIDTH mm	THICKNESS mm	APPLICABLE MODEL	ALLOWABLE TORQUE			
SH8D × 5.5	N · m 1.5	13	3	CL6N,CSP6N,CSF7N,CL1.5N CSP1.5N,CL12N,CSP12N CSF14N,CL3N,CSP3N CDB7N-S,CDB14N-S CEM9N2	kgf · cm 15			
SH8D × 6		15	3.5			25		
SH8D × 7		17	4			35		
SH8D × 8		20	4.5			70		
SH8D × 10	12	25	5.5		120			
SH8D × 11		27						
SH8D × 12		29						
SH8D × 13		32						
SH8D × 14								
SH8D × 16								
SH8D × 17								
SH8D × 19								
SH8D × 21								
SH8D × 22								
SH8D × 24								
SH10D × 7	22.5	28	6.5	CL25N,YCL12N,PCL25N CSP25N,YCL23N CF25N CDB25N-S CEM18N2	225			
SH10D × 8								
SH10D × 10								
SH10D × 11								
SH10D × 12		32						
SH10D × 13								
SH10D × 14								
SH10D × 16								
SH10D × 17								
SH10D × 18								
SH10D × 19		39						
SH10D × 21								
SH10D × 22								
SH10D × 24								
SH12D × 8	7	20	5	CTA50,CTB50 CL50N,YCL45N CEM45N2,CSP50N,YCL70N PCL50N,CF50N,CDB50N-S	70			
SH12D × 10	11.8	24			118			
SH12D × 11	20.5	28			5.5	205		
SH12D × 12	29.5	31			6.5	295		
SH12D × 13		32						
SH12D × 14	59	38			8	590		
SH12D × 16	70	40			10	700		
SH12D × 17		41			11			
SH12D × 18		43			13			
SH12D × 19		52			12			
SH12D × 21		59			38		8	590
SH12D × 22								
SH12D × 24								
SH12D × 27								
SH15D × 12	140	51	13	CTA100,CTB100 CL100N,CL50N,PCL100N PCL140N,CL140N,YCL90N PCL140N,CSP100N,CSP50N CSP140N,YCL140N CF100N,CEM90N2 CDB100N-S	1400			
SH15D × 13								
SH15D × 14								
SH15D × 16								
SH15D × 17		60						
SH15D × 18								
SH15D × 19								
SH15D × 21								
SH15D × 22								
SH15D × 24								
SH15D × 26		62						
SH15D × 27								
SH15D × 30								
SH15D × 32								
SH19D × 17	180	54	13	CTA200,CTB200 CL200N,YCL180N,PCL200N CSP200N CF150N,CEM180N2 CDB200N-S	1800			
SH19D × 18								
SH19D × 19								
SH19D × 21								
SH19D × 22		60						
SH19D × 24								
SH19D × 27								
SH19D × 30								
SH19D × 32		75						
SH19D × 34								
SH19D × 36								
SH19D × 41								
SH22D × 19	420	63	15	CTA360,CTB360 CL280N,CL420N CSP280N,CSP420N CF230N,CEM360N2 CEM500N2 CDB300N-S,CDB420N-S CTB500	kgf · m 42			
SH22D × 22								
SH22D × 24		70						
SH22D × 27								
SH22D × 30								
SH22D × 32								
SH22D × 34								
SH22D × 36								
SH22D × 41								
SH22D × 46						85		

MODEL (Head Size × Width)	ALLOWABLE TORQUE	OUTSIDE WIDTH mm	THICKNESS mm	APPLICABLE MODEL	ALLOWABLE TORQUE		
SH27D × 22	N · m 255	65	14	CLE550N CLE750N	kgf · m		
SH27D × 24		72	15				
SH27D × 27		82	16				
SH27D × 30		88	19				
SH27D × 32	750	92	20		CTB850 CLE850N CLE1200N CF850N,CEM850N2	85	
SH27D × 34		90					
SH27D × 36		94	21				
SH27D × 41		98	22				
SH27D × 46	850	100	24				120
SH27D × 50		103	26				
SH32D × 27		1200	110	24			
SH32D × 30							
SH32D × 32							
SH32D × 34							
SH32D × 36	120						
SH32D × 41							
SH32D × 46							
SH32D × 50							
SH32D × 55	29						
SH32D × 60							

INTERCHANGEABLE HEAD

RH RING HEAD



Note : RH8D×5.5 to RH8D×7 are Hexagon.

MODEL (Head Size × Width)	ALLOWABLE TORQUE	OUTSIDE WIDTH mm	THICKNESS mm	APPLICABLE MODEL	ALLOWABLE TORQUE		
	N·m				kgf·cm		
RH8D×5.5	1.5	10.5	5	CL6N,CSP6N,CSF7N,CL1.5N CSP1.5N,CL12N,CSP12N CSF14N,CL3N,CSP3N CDB7N-S,CDB14N-S	120		
RH8D×6	2.4	11	6				
RH8D×7	3.6	12	7				
RH8D×8	7.2	13.5	7				
RH8D×10	12.2	15.5	7	CEM9N2 CEM10N3			
RH8D×11	14	17	8	RH10D×8 RH10D×10 RH10D×11 RH10D×12 RH10D×13 RH10D×14 RH10D×16 RH10D×17 RH10D×18 RH10D×19 RH10D×21 RH10D×22	225		
RH8D×12		19					
RH8D×13		19					
RH10D×8		12.5					
RH10D×10	12.2	15.5	7	CL25N,YCL12N,PCL25N CSP25N,YCL23N CF25N CDB25N-S CEM18N2 CEM20N3	70 118 205 295 590		
RH10D×11	20	17	5.5				
RH10D×12	25	18	6.5				
RH10D×13		19					
RH10D×14	20	10	7				
RH10D×16	22						
RH10D×17	24	12	8				
RH10D×18	25						
RH10D×19	26	13	9				
RH10D×21	28						
RH10D×22	29	13	10				
RH12D×8	7.2					15	5
RH12D×10	12.2	16	5			CTA50,CTB50 CL50N,YCL45N CEM45N2,CSP50N,YCL70N PCL50N,CF50N,CDB50N-S CEM50N3	70 118 205 295 590
RH12D×11	20	18	5.5				
RH12D×12	29.5	20	6.5				
RH12D×13		21					
RH12D×14	59	20	10				
RH12D×16	70	24	12				
RH12D×17		25					
RH12D×18	26	13	13				
RH12D×19	26						
RH12D×21	29	13	14				
RH12D×22	30						
RH15D×12	29.5	19	7	CTA100,CTB100 CL100N,CL50N,PCL100N PCL50N,CL140N,YCL90N PCL140N,CSP100N,CSP50N CSP140N,YCL140N CF100N,CEM90N2 CDB100N-S CEM100N3	590		
RH15D×13		20.5					
RH15D×14	59	22	8				
RH15D×16		25					
RH15D×17	100	26	10				
RH15D×18		27					
RH15D×19	140	28	13				
RH15D×21		31					
RH15D×22	140	34	13				
RH15D×24		37					
RH15D×27	140	41	13				
RH15D×30		41					
RH19D×14	59	22.5	8			CTA200,CTB200 CL200N,YCL180N,PCL200N CSP200N CF150N,CEM180N2 CDB200N-S CEM200N3	1800
RH19D×17	100	27	10				
RH19D×18	166	28	11				
RH19D×19		29					
RH19D×21	200	32	13				
RH19D×22		35					
RH19D×24	200	39	15				
RH19D×27		41					
RH19D×30	200	44	15				
RH19D×32		47					
RH19D×34	200	49	15				
RH19D×36		55					
RH19D×41	166	30	14				
RH22D×19		34					
RH22D×22	255	37	15	CTA360,CTB360 CL280N,CL420N CSP280N,CSP420N CF230N,CEM360N2 CEM500N2 CDB300N-S,CDB420N-S CTB500 CEM360N3,CEM500N3	kgf·m		
RH22D×24	490	41	17				
RH22D×27		44					
RH22D×30	500	45	17				
RH22D×32		49					
RH22D×34	500	51	17				
RH22D×36		57					
RH22D×41	500	62	17				
RH22D×46		62					
RH27D×22	255	38	14			CLE550N CLE750N	120
RH27D×24	350	42	15				
RH27D×27	490	46	16				
RH27D×30	670	46	19				
RH27D×32	750	48	20				
RH27D×34	670	51	20				
RH27D×36	750	52	21				
RH27D×41		58					
RH27D×46	750	64	24				
RH27D×50		69					
RH32D×27	490	43	16	CTB850 CLE850N CLE1200N CF850N,CEM850N2 CEM850N3	120		
RH32D×30	670	46.5	18				
RH32D×32	860	49	18				
RH32D×34		52					
RH32D×36	860	53	24				
RH32D×41		59					
RH32D×46	1200	65	27				
RH32D×50		69					
RH32D×55	1200	75	29				
RH32D×60		80					

QH REVERSIBLE RATCHET HEAD



MODEL	SQUARE DRIVE (mm)	APPLICABLE MODEL
QH8D	6.35	CL6N,CSP6N,CSF7N,CL1.5N,CSP1.5N,CL12N,CSP12N CSF14N,CL3N,CSP3N,CDB7N-S,CDB14N-S,CEM9N2 CEM10N3
QH10D	9.5	CL25N,YCL12N,PCL25N CSP25N,YCL23N CF25N,CDB25N-S,CEM18N2,CEM20N3
QH12D		CTA50,CTB50 CL50N,YCL45N CEM45N2,CSP50N,YCL70N PCL45N,CF50N,CDB50N-S,CEM50N3
QH15D	12.7	CTA100N,CTB100N CL100N,CL50N,PCL100N,PCL50N,CL140N,YCL90N PCL140N,CSP100N,CSP50N,CSP140N,YCL140N CF100N,CEM90N2,CDB100N-S,CEM100N3
QH19D		CTA200,CTB200 CL200N,YCL180N,PCL200N,CSP200N CF150N,CEM180N2 CDB200N-S,CEM200N3
QH22D	19.0	CTA360,CTB360,CTB500 CL280N,CL420N,CDB300N-S,CDB420N-S CSP280N,CSP420N,CF420N CF230N,CEM360N2,CEM500N2,CEM360N3,CEM500N3
QH27D		CLE550N CLE750N
QH32D	25.4	CLE850N,CTB850 CLE1200N CF850N,CEM850N2,CEM850N3

RQH REVERSIBLE FEMALE RATCHET HEAD



MODEL (Head Size × Width)	APPLICABLE MODEL
RQH12D×12	CTA50,CTB50 CL50N,YCL45N
RQH12D×14	CEM45N2,CSP50N,YCL70N PCL45N,CF50N,CDB50N-S,CEM50N3
RQH15D×14	CTA100,CTB100 CL100N,CL50N,PCL100N,PCL50N,CL140N,YCL90N
RQH15D×17	PCL140N,CSP100N,CSP50N,CSP140N,YCL140N CF100N,CEM90N2,CDB100N-S,CEM100N3
RQH19D×17	CTA200,CTB200 CL200N,YCL180N,PCL200N,CSP200N
RQH19D×19	CF150N,CEM180N2 CDB200N-S,CEM200N3
RQH19D×22	CDB200N-S,CEM200N3
RQH22D×22	CTA360,CTB360,CTB500 CL280N,CL420N,CDB300N-S,CDB420N-S CSP280N,CSP420N,CF420N CF230N,CEM360N2,CEM500N2 CEM360N3,CEM500N3
RQH22D×24	CEM360N3,CEM500N3

INTERCHANGEABLE HEAD

DH SQUARE DRIVE HEAD



MODEL	SQUARE DRIVE (mm)	APPLICABLE MODEL
DH10D	9.5	CL25N, YCL12N, PCL25N CSP25N, YCL23N CF25N, CDB25N-S, CEM18N2, CEM20N3
DH12D		CTA50N, CTB50N CL50N, YCL45N CEM45N2, CSP50N, YCL70N PCL45N, CF50N, CDB50N-S, CEM50N3
DH15D	12.7	CTA100, CTB100 CL100N, CL50N, PCL100N, PCL50N, CL140N, YCL90N PCL140N, CSP100N, CSP50N, CSP140N, YCL140N CF100N, CEM90N2, CDB100N-S, CEM100N3
DH19D		CTA200, CTB200 CL200N, YCL180N, PCL200N, CSP200N CF150N, CEM180N2 CDB200N-S, CEM200N3
DH22D	19.0	CTA360, CTB360, CTB500 CL280N, CL420N, CDB300N-S, CDB420N-S CSP280N, CSP420N, CF420N CF230N, CEM360N2, CEM500N2 CEM360N3, CEM500N3

HH HEX HEAD



HH8D is available only 6.35 hex bit.

MODEL (Head Size × Width)	APPLICABLE MODEL
HH8D	CL6N, CSP6N, CSF7N, CL1.5N, CSP1.5N, CL12N, CSP12N CSF14N, CL3N, CSP3N, CDB7N-S, CDB14N-S, CEM9N2 CEM10N3
HH10D × 5	CL25N, YCL12N, PCL22.5N
HH10D × 6	CSP25N, YCL23N
HH10D × 8	CF25N, CDB25N-S, CEM18N2, CEM20N3
HH12D × 5	CTA50, CTB50
HH12D × 6	CL50N, YCL45N
HH12D × 8	CEM45N2, CSP50N, YCL70N
HH12D × 10	PCL45N, CF50N, CDB50N-S, CEM50N3
HH15D × 8	CTA100, CTB100
HH15D × 10	CL100N, CL50N, PCL100N, PCL50N, CL140N, YCL90N
HH15D × 12	PCL140N, CSP100N, CSP50N, CSP140N, YCL140N
HH15D × 14	CF100N, CEM90N2, CDB100N-S, CEM100N3
HH19D × 10	CTA200, CTB200
HH19D × 12	CL200N, YCL180N, PCL200N, CSP200N
HH19D × 14	CF150N, CEM180N2
HH19D × 17	CDB200N-S, CEM200N3
HH19D × 19	
HH22D × 12	CTA360, CTB360, CTB500
HH22D × 14	CL280N, CL420N, CDB300N-S, CDB420N-S
HH22D × 17	CSP280N, CSP420N, CF420N
HH22D × 19	CF230N, CEM360N2, CEM500N2
HH22D × 22	CEM360N3, CEM500N3

Note 1 : Insert hex wrench to use.

Note 2 : HH8D is for Hexagon Bits, not for Hexagon Socket Screw key.

PH PIPE WRENCH HEAD



MODEL (Head Size × Width)	PIPE WRENCH NOMINAL SIZE	GRIPPABLE PIPE DAMETER mm	GRIPPABLE TUBE DIA METER (mm)	APPLICABLE MODEL
PH15D × 350	350	13~38	25.5	CSP50N, CSP100N, CSP140N
PH19D × 350	350			CSP200N
PH22D × 350	350	26~52	39	CSP280N, CSP420N
PH22D × 450	450			CSP280N, CSP420N
PH32D × 450	450			

Note 1 : When you use with CSP, order with PH for torque set.

Note 2 : If you need a wrench with a scale type, order PHL model.

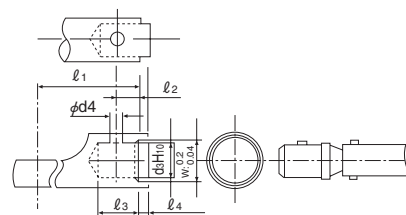
FH HOOK HEAD



MODEL	OUT DIA. OF ADAPTING MODEL	NOMINAL SIZE	APPLICABLE MODEL
FH15D × 30	30~38	M20	
FH15D × 38	38~50	M25	CL100N, CL50N, PCL100N, PCL50N, CL140N, YCL140N, YCL90N, PCL140N,
FH15D × 45	45~52	M30	CSP140N, CSP100N, CSP50N, CF100N, CEM90N2, CDB100N-S, CTA100, CTB100
FH15D × 52	52~58	M35	CEM100N3
FH15D × 58	58~65	M40	
FH19D × 65	65~75	M45, M50	CL200N, YCL180N, PCL200N, CSP200N, CF150N, CEM180N2, CDB200N-S, CTA200, CTB200
FH22D × 75	75~85	M60, M65	CEM200N3
FH22D × 85	85~98	M70, M75	CL280N, CL420N, CSP280N, CSP420N, CF230N, CEM360N2, CEM500N2, CDB300N-S, CDB420N-S
			CTB360, CTB500
			CEM360N3, CEM500N3

INTERCHANGEABLE HEAD COMMON DIMENSION

MODEL	ℓ ₁	ℓ ₂	ℓ ₃	ℓ ₄	d3	d4	W
SH8D, RH, QH, HH	35	4	10	2	8	3.0	9
SH10D, RH, QH, HH, DH	44	5	12	2.5	10	3.5	12
SH12D, RH, QH, HH, DH, RQH	53	6	14	3	12	3.5	14
SH15D, RH, QH, HH, DH, RQH, FH	63	7.5	17	3	15	4.5	17
SH19D, RH, QH, HH, DH, RQH, FH	80	9.5	21	3	19	4.5	21
SH22D, RH, QH, HH, DH, RQH, FH	100	11	24	3.5	22	5.5	24
SH27D, RH, QH							
SH32D, RH, QH	160	16	34	7	32	6.5	35



Caution : You must strictly observe the dimension "ℓ₁" when you order special heads for CL, CSP, CF, YCL, CDB, CEM, CTA and CTB type tools. If the "ℓ₁" length is not correct, you will not be able to obtain correct torque.

INTERCHANGEABLE BIT

BIT POWER/HAND TORQUE TOOL

How to select bits

After determining the torque driver, select a bit according to the following instructions:

1. Select root shape from adapting models.
2. Check the screw head (plus, minus, hexagon socket head, cap screw or set screw).
See Table A and B.
3. Major screws are shown in Table A and B.

Head shape of bolts (reference)

Table A

NOMINAL SIZE (d)	OPPOSITE SIZE OF HEX BOLT (B)	OPPOSITE SIZE OF SOCKET HEAD BOLT (B)	OPPOSITE SIZE OF SET SCREW (B)
M 2.5	5.0	2	1.27
M 3	5.5	2.5	1.5
(M 3.5)	6	—	—
M 4	7	3	2
(M 4.5)	—	—	—
M 5	8	4	2.5
M 6	10	5	3
(M 7)	11	—	—
M 8	13	6	4
M10	16 17	8	5
REF JIS	JISB 1180	JISB 1176	JISB 1177

■ SIZE OF (+) BIT

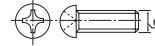


Table B

NO. OF CROSS NOMINAL SIZE OF SCREW (d)	HOLE	REMARKS
M1.6,M2	#0 (S-0)	PAN HEAD, FLAT HEAD, OVAL HEAD AND
(M2),(M2.2),M2.5,(M3)	#1 (H-1)	BINDING HEAD MACHINE SCREW
M3,(M3.5),M4,(M4.5),M5	#2 (H-2)	M3, #1 is binding head machine screw only.
M6,M8	#3 (H-3)	M2, #1 is not adapted in ISO

How to order :

Indicate the model name and catalog No.

(EXAMPLE) MODEL NAME CATALOG NO.

⊕ BIT A - O 104

Root Shape Sign Point Shape Sign

PLUS		MINUS		POINT SHAPE SQUARE		BOX		HEX	
SIGN	SIZE	SIGN	SIZE	SIGN	SIZE	SIGN	SIZE	SIGN	SIZE
0	#0 (S-0)	10	0.15 × 1	□2	□6.35 (1/4)	W 5.5	5.5	W1.27	1.27
1	#1 (H-1)	11	0.2 × 1.5	□3	□9.5 (3/8)	W 6	6	W1.5	1.5
2	#2 (H-2)	12	0.3 × 2			W 7	7	W2	2
3	#3 (H-3)	13	0.4 × 2.4			W 8	8	W2.5	2.5
4	#4 (H-4)	14	0.6 × 3.8			W10	10	W3	3
		15	0.7 × 7					W4	4
		16	0.9 × 7					W5	5
		17	1 × 10					W6	6
		18	1 × 12					W8	8
		19	1.2 × 17						
		20	1.4 × 14						

POINT SHAPE HEXALOBULAR			
SIGN	FLAT HEAD	SOCKET HEAD	SET SCREW
T5	M2		M2.5
T6	M2		M3
T7			M3.5
T8	M2.5	M2.5	M4
T9			M4.5
T10	M3	M3	M5
T15	M3.5	M3.5	
T20	M4	M4/M4.5	M6

INTERCHANGEABLE BIT

BIT POWER/HAND TORQUE TOOL

SIGN	ROOT DIMENSION	TIP SIZE	CATALOG NO.	APPLICABLE MODEL
A		⊕ #0 ⊖ 0.4×2.4	(104) (105)	U30CN,(UV30CN)
B		⊕ #1	(85)	U60CN ~ 1000CN, ULR120N ~ ULR500CN, (UPS30N ~ 250N, UPSR30CN ~ 250CN) MG60CN ~ 250CN, MF6N ~ MF12N LTD15CN ~ 1000CN, RTD15CN ~ 500CN BMLD15CN ~ 30CN, NTD15CN ~ 1000CN RNTD15CN ~ 500CN, FTD50CN ~ 400CN FTD2CN-S ~ 400CN2-S STC50CN ~ STC400CN RTDZ260CN ~ RTDZ500CN
		⊕ #2	(86)	
		⊕ #3	(87)	
		⊖ 0.7×7	(88)	
		⊖ 0.9×7	(89)	
		□ 6.35	(90)	
		⊙ 5.5	(91)	
		⊙ 6	(95)	
		⊙ 7	(92)	
		⊙ 8	(93)	
		⊙ 10	(94)	
		○ 1.27	(56)	
		○ 1.5	(57)	
		○ 2	(58)	
		○ 2.5	(59)	
		○ 3	(60)	
○ 4	(61)			
○ 5	(62)			
○ 6	(63)			
○ 8	(64)			
C		⊕ #0	(109)	(UV60CN ~ UV250CN)
		⊕ #1	(106)	
		⊕ #2	(107)	
		⊖ 0.6×3.8	(108)	
		★ T5	(470)	
★ T6	(471)			
★ T8	(472)			
D		⊕ #1	(84)	(FTD8N,16N) FTD8N2,16N2-S
		⊕ #2	(80)	
		⊕ #3	(81)	
		⊖ 1.4×14	(82)	
		⊖ 1×12	(83)	
E		⊕ #1 ⊖ 0.6×3.8	(70) (71)	(02FTD ~ 2FTD)
F		⊕ #0	(115)	AMLD1CN ~ 8CN, MTD1MN ~ 10MN
		⊕ #1	(116)	
		⊖ 0.15×1	(111)	
		⊖ 0.2×1.5	(112)	
		⊖ 0.3×2	(113)	
G		⊕ #3	(35)	LTD2000CN
		⊕ #4	(36)	
		⊖ 1×10	(37)	
		⊖ 1×12	(38)	
		⊖ 1.2×17	(39)	
		□ 6.35	(33)	
		□ 9.53	(34)	
H		⊕ #3	(700)	AUR5N



⊕ Phillips



⊖ Slotted



⊙ Box



○ HEX



□ SQ. DR

NEW



★ HEXALOBULAR

NEW

NEW

NEW

SOCKET OR ADAPTER

SOCKET POWER/HAND TORQUE TOOL



FOR POWER TOOL

FOR HAND TOOL

A power hand torque tool normally tightens bolts by using a socket. Select a socket that matches the torque tool. Dimensions of the power torque tool square drives are given in the specification column on each page. Major screw head widths are given below in table E.

Width across flats of bolt. (Ref.)



Width across flats of bolt

table E

NOMINAL SCREW (d)	HEX HEAD BOLT (B)	SMALL HEX HEAD BOLT (B)	HIGH STRENGTH HEX BOLT FOR FRICTION GRIP JOINTS (B)	HEX SOCKET HEAD CAP SCREW (B)	HEX SOCKET SET SCREW (B)
M 2.5	4.5	—	—	2	1.27
M 3	5.5	—	—	2.5	1.5
(M 3.5)	6	—	—	—	—
M 4	7	—	—	3	2
(M 4.5)	8	—	—	—	—
M 5	8	—	—	4	2.5
M 6	10	—	—	5	3
(M 7)	11	—	—	—	—
M 8	13	12	—	6	4
M10	16	17	14	8	5
M12	18	19	17	22	10
(M14)	21	22	19	—	6
M16	24	22	27	—	—
(M18)	27	24	—	14	8
M20	30	27	32	—	10
(M22)	32	34	30	36	—
M24	36	32	41	—	—
(M27)	41	36	46	19	—
M30	46	41	50	22	—
(M33)	50	46	—	24	—
M36	55	50	—	—	—
(M39)	60	55	—	27	—
M42	65	—	—	32	—
Ref. JIS	JISB1180	JISB1180	JISB1186	JISB1176	JISB1177

How to order :

Indicate model name and catalog No.

(EXAMPLE) MODEL NAME CATALOG NO.
 SOCKET 3P-10 250
 Socket Inlet Sign | | Width Across Flats
 Purpose Sign

SIGN	INLET	SIGN	PURPOSE
2	□6.3 (1/4")	P	for power tool
3	□9.5 (3/8")	H	for hand tool
4	□12.7 (1/2")		
6	□19 (3/4")		
8	□25.4 (1")		

How to order :

Indicate model name and catalog No.

(EXAMPLE) MODEL NAME CATALOG NO.
 ADAPTER 3P-4 290
 Inlet Sign (Female) | | Outlet Sign (Male)
 Purpose Sign

SOCKET FOR POWER TORQUE TOOL

MODEL	CATALOG NO.	DIMENSION mm	
		INLET (FEMALE)	WIDTH ACROSS FLATS
Socket 3P-10	(250)	9.5	10
Socket 3P-12	(251)		12
Socket 3P-13	(252)		13
Socket 3P-14	(253)		14
Socket 3P-16	(255)		16
Socket 3P-17	(254)		17
Socket 4P-14	(260)		12.7
Socket 4P-16	(264)	16	
Socket 4P-17	(261)	17	
Socket 4P-18	(265)	18	
Socket 4P-19	(262)	19	
Socket 4P-21	(266)	21	
Socket 4P-22	(263)	22	

Note 1 : O-ring and pin are not included.

If these parts are required, user must supply them.

ADAPTER FOR POWER TORQUE TOOL

MODEL	CATALOG NO.	DIMENSION mm	
		INLET (FEMALE)	OUTLET (MALE)
Adapter 3P-4	(290)	9.5	12.7
Adapter 4P-3	(291)	12.7	9.5
Adapter 4P-6	(292)		19
Adapter 6P-4	(293)	19.0	12.7
Adapter 6P-8	(294)		25.4
Adapter 8P-6	(295)	25.4	19

Note 1 : O-ring and pin are not included. If these parts are required, user must supply them.

SOCKET FOR HAND TORQUE TOOL

MODEL	CATALOG NO.	DIMENSION mm		
		INLET (FEMALE)	WIDTH ACROSS FLATS	
Socket 2H-8	(201)	6.35	8	
Socket 2H-10	(202)		10	
Socket 2H-12	(203)		12	
Socket 2H-13	(204)		13	
Socket 3H-10	(210)	9.5	10	
Socket 3H-12	(211)		12	
Socket 3H-13	(212)		13	
Socket 3H-14	(213)		14	
Socket 3H-16	(216)		16	
Socket 3H-17	(214)		17	
Socket 3H-18	(217)		18	
Socket 3H-19	(215)		19	
Socket 4H-14	(220)		12.7	14
Socket 4H-16	(227)			16
Socket 4H-17	(221)	17		
Socket 4H-18	(228)	18		
Socket 4H-19	(222)	19		
Socket 4H-21	(229)	21		
Socket 4H-22	(223)	22		
Socket 4H-24	(224)	24		
Socket 4H-27	(225)	27		
Socket 4H-30	(226)	30		
Socket 6H-21	(237)	19.0	21	
Socket 6H-22	(230)		22	
Socket 6H-24	(231)		24	
Socket 6H-27	(232)		27	
Socket 6H-30	(233)		30	
Socket 6H-32	(234)		32	
Socket 6H-34	(236)		34	
Socket 6H-36	(235)		36	
Socket 8H-32	(240)		25.4	32
Socket 8H-34	(246)			34
Socket 8H-36	(241)	36		
Socket 8H-41	(242)	41		
Socket 8H-46	(243)	46		
Socket 8H-50	(244)	50		
Socket 8H-55	(245)	55		

Note 1 : For sockets with square drive sizes of 6.3 and 9.5, the opposite ends are single hex. For all other square drive sizes, it is double hex.

Note 2 : Please use catalog No. when ordering.

ADAPTER FOR HAND TORQUE TOOL

MODEL	CATALOG NO.	DIMENSION mm	
		INLET (FEMALE)	OUTLET (MALE)
Adapter 2H-3	(270)	6.35	9.5
Adapter 3H-2	(271)	9.5	6.3
Adapter 3H-4	(272)		12.7
Adapter 4H-3	(273)	12.7	9.5
Adapter 4H-6	(274)		19
Adapter 6H-4	(275)	19.0	12.7



POWER AND HAND TORQUE TOOL

MODEL	CATALOG NO.	DIMENSION mm	
		INLET (FEMALE)	WIDTH ACROSS FLATS
Socket 2C-2.5	(430)	6.35	2.5
Socket 2C-3	(431)		3
Socket 2C-4	(432)		4
Socket 3C-3	(440)		3
Socket 3C-4	(441)	9.5	4
Socket 3C-5	(442)		5
Socket 3C-6	(443)		6
Socket 4C-6	(450)		6
Socket 4C-8	(451)	12.7	8
Socket 4C-10	(452)		10
Socket 4C-12	(453)		12
Socket 4C-14	(454)		14
Socket 6C-14	(460)	19.0	14
Socket 6C-17	(461)		17
Socket 6C-19	(462)		19

Note 1 : For hex. socket.

TORQUE WRENCH TESTER

NOTE Torque Wrench Checker, Line Checker

Digital Torque Wrench Tester.
Data Processing Features RS232C
Output.



Manual Fixed type
Digital tester

Accuracy ±1%+1 digit

MODE L	CAPACITY		MAX. EFFECTIVE LENGTH mm	INLET DRIVE mm	Dimension mm			WEIGHT Approx. kg	ADAPTER		MODEL Metric	CAPACITY	
	MIN. ~ MAX.	1 digit			OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT		SQUARE	HEX		MIN. ~ MAX.	1 digit
NOTE20N	N·m 2 ~ 20	N·m 0.005	400	9.5	500	257	222	11	6.35	10 · 13 · 19 12 · 14 · 17	200NOTE2	kgf·cm 20 ~ 200	kgf·cm 0.05
NOTE36N	3.6 ~ 36	0.01									360NOTE2	36 ~ 360	0.1
NOTE100N	10 ~ 100	0.02	660	12.7	780	317	270	13	6.35, 9.53	17 · 22 · 27 19 · 24 · 30	1000NOTE2	100 ~ 1000	0.2
NOTE200N	20 ~ 200	0.05									2000NOTE2	200 ~ 2000	0.5
NOTE360N	36 ~ 360	0.1	19.0	12.7	1380	388	272	25	—	22 · 27 · 29 30 · 32 · 36 34 · 41 46 · 50	3600NOTE2	kgf·m 3.6 ~ 36	kgf·m 0.01
NOTE700N	70 ~ 700	0.2									7000NOTE2	7 ~ 70	0.02
NOTE1000N	100 ~ 1000	0.2	1650	25.4	1780	584	343	45	19.05	—	10000NOTE2	10 ~ 1000	—

Note : DOTE inspection equipment is an optional accessory.
Total 99 data memory.

NOTE OPTION

ADAPTER

CATALOG NO.	SPEC
285	3/8-7 · 8 · 9
286	1/2-16 · 18 · 21
287	1/2-17 · 22 · 27
288	1/2-19 · 24 · 30

CONNECTING CABLE

CATALOG NO.	DESCRIPTION
380	NOTE to EPP16M2
561	NOTE to PC (D-SUB 9 pins Female)

SOFTWARE..... P.41

MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

PRINTER..... P.41

MODEL
EPP16M2

BATTERY PACK

MODEL
BP-100

DOT Torque Wrench Checker, Line Checker

Dial Indicating Torque Wrench Tester.
Applicable Only for Clockwise Testing.

Manual Analog type Fixed type



Accuracy ±2%

MODEL	CAPACITY		MAX. EFFECTIVE LENGTH mm	INLET DRIVE mm	Dimension mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.			OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	GRAD.
DOT35N	N·m 5 ~ 35	N·m 0.1	400	9.5	487	257	193	8	350DOT	kgf·cm 50 ~ 350	kgf·cm 1
DOT50N	5 ~ 50	0.2							500DOT	50 ~ 500	2
DOT100N	10 ~ 100	0.5	660	12.7	765	317	221	10	1000DOT	100 ~ 1000	5
DOT300N	30 ~ 300	1							3000DOT	300 ~ 3000	10
DOT700N	70 ~ 700	2	1260	19.0	1365	388	243	25	7000DOT	700 ~ 7000	20

Note 1 : DOT inspection equipment is an optional accessory.

DOT(E)-MD Torque Wrench Tester

Torque Wrench Tester with
Electric Motor Driven Loading.

Lever Motor drive loading Fixed type

DIRECTION DOTE MD DIRECTION DOT MD



DOT (E) - MD

Accuracy ±2%

MODEL	CAPACITY		MAX. EFFECTIVE LENGTH mm	INLET DRIVE mm	Dimension mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.			OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	GRAD.
DOT35N-MD	N·m 5 ~ 35	N·m 0.1	400	9.5	487	257	193	8	350DOT-MD	kgf·cm 50 ~ 350	kgf·cm 1
DOT50N-MD	5 ~ 50	0.2							500DOT-MD	50 ~ 500	2
DOT100N-MD	10 ~ 100	0.5	660	12.7	765	317	221	10	1000DOT-MD	100 ~ 1000	5
DOT300N-MD	30 ~ 300	1							3000DOT-MD	300 ~ 3000	10
DOT700N-MD	70 ~ 700	2	1260	19.0	1365	388	243	25	7000DOT-MD	700 ~ 7000	20

Accuracy ±1%+1 digit

MODEL	CAPACITY		MAX. EFFECTIVE LENGTH mm	INLET DRIVE mm	Dimension mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	1 digit			OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	1 digit
NOTE20N-MD	N·m 2 ~ 20	N·m 0.005	400	9.5	500	257	222	11	200NOTE2-MD	kgf·cm 20 ~ 200	kgf·cm 0.05
NOTE36N-MD	3.6 ~ 36	0.01							360NOTE2-MD	36 ~ 360	0.1
NOTE100N-MD	10 ~ 100	0.02	660	12.7	780	317	270	13	1000NOTE2-MD	100 ~ 1000	0.2
NOTE200N-MD	20 ~ 200	0.05							2000NOTE2-MD	200 ~ 2000	0.5
NOTE360N-MD	36 ~ 360	0.1	19.0	12.7	1380	388	272	25	3600NOTE2-MD	kgf·m 3.6 ~ 36	kgf·m 0.01
NOTE700N-MD	70 ~ 700	0.2							7000NOTE2-MD	7 ~ 70	0.02
NOTE1000N-MD	100 ~ 1000	0.2	1650	25.4	1780	584	343	45	10000NOTE2-MD	10 ~ 100	—

Note : Motor assembly can be supplied separately upon request.

MODEL	DESCRIPTION
MD-DOT	Motor assembly

DA Down Adapter

Compact Adapter



MODEL	CATALOG NO.	Dimension mm				ALLOWABLE TORQUE N·m	WEIGHT Approx. g
		EXTERNAL DRIVE	INTERNAL DRIVE	HEIGHT	DIAMETER		
DA3-2	296	9.5	6.35	12	13	50	5
DA4-3	297	12.7	9.5	15	18	200	11
DA6-4	298	19.0	12.7	19	28	750	34
DA8-6	299	25.4	19.0	26	35	2100	66
DA12-8	300	38.1	25.4	44	55	3000	320

TORQUE WRENCH TESTER

TF TORQUE WRENCH TESTER

 Fully automatic
Digital tester
Fixed type

Fully Automatic Digital Torque Wrench Tester.



Accuracy $\pm 1\% + 1$ digit

MODEL	CH	CAPACITY										INLET DRIVE	TORQUE WRENCH MAX. EFFECTIVE LENGTH	DIMENSION mm			BODY WEIGHT Approx. kg
		N.M		KGF.CM		KGF.M		LBF.IN		LBF.FT				OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT	
		MIN-MAX.	1 DIGIT	MIN-MAX.	1 DIGIT	MIN-MAX.	1 DIGIT	MIN-MAX.	1 DIGIT	MIN-MAX.	1 DIGIT						
TF200N	1	5 ~ 200	0.05	50 ~ 2000	0.5	0.5 ~ 20	0.005	50 ~ 1700	0.5	5 ~ 140	0.05	1/2	570	1860	550	940	240
	2	0.5 ~ 20	0.005	5 ~ 200	0.05	0.05 ~ 2	0.0005	5 ~ 170	0.05	0.5 ~ 14	0.005	3/8					
TF500N	1	20 ~ 500	0.2	200 ~ 5000	2	2 ~ 50	0.02	200 ~ 4500	2	20 ~ 370	0.2	3/4	1020	1860	550	940	240
	2	2 ~ 50	0.02	20 ~ 500	0.2	0.2 ~ 5	0.002	20 ~ 450	0.2	2 ~ 37	0.02	3/8					
TF1000N	1	25 ~ 1000	0.25	250 ~ 10000	2.5	2.5 ~ 100	0.025	250 ~ 8500	2.5	25 ~ 700	0.25	1	1550	2160	550	940	250
	2	5 ~ 200	0.05	50 ~ 2000	0.5	0.5 ~ 20	0.005	50 ~ 1700	0.5	5 ~ 140	0.05	1/2					
	3	0.5 ~ 20	0.005	5 ~ 200	0.05	0.05 ~ 2	0.0005	5 ~ 170	0.05	0.5 ~ 14	0.005	3/8					
TF2000N	1	100 ~ 2100	1	1000 ~ 21000	10	10 ~ 210	0.1	1000 ~ 18000	10	100 ~ 1500	1	1	2000	2660	550	940	315
	2	20 ~ 500	0.2	200 ~ 5000	2	2 ~ 50	0.02	200 ~ 4500	2	20 ~ 370	0.2	3/4					
	3	2 ~ 50	0.02	20 ~ 500	0.2	0.2 ~ 5	0.002	20 ~ 450	0.2	2 ~ 37	0.02	3/8					
TF3000N	1	200 ~ 3000	1	2000 ~ 30000	10	20 ~ 300	0.1	2000 ~ 25000	10	200 ~ 2000	1	1 1/2	2240	3160	550	940	380
	2	100 ~ 2100	1	1000 ~ 21000	10	10 ~ 210	0.1	1000 ~ 18000	10	100 ~ 1500	1	1					
	3	20 ~ 500	0.2	200 ~ 5000	2	2 ~ 50	0.02	200 ~ 4500	2	20 ~ 370	0.2	3/4					

Note 1 : Unit conversion for N.m / kgf.cm / kgf.m / lbf.in / lbf.ft are available

Note 2 : TF inspection equipment is an optional accessory.

TCC TORQUE WRENCH TESTER

  Manual
Digital tester
Fixed type

High performance in wide range
Covering more than 2 DOTE model's capacity
Tool management control function equipped



TCC100N

Accuracy $\pm 1\% + 1$ digit

MODEL	CH	TORQUE CAPACITY		MAX EFFECTIVE LENGTH mm	SQUARE DRIVE	TOTAL LENGTH mm	WIDTH mm	HEIGHT mm	WEIGHT kg
		MIN-MAX	1 DIGIT						
TCC100N	1	4 ~ 100N·m	0.02	440	12.7	670	370	330	26
	2	1 ~ 25N·m	0.005						
TCC100N-D	1	4 ~ 100N·m	0.02	440	12.7	670	370	330	26
	2	20 ~ 500cN·m	0.1cN·m						
TCC500N	1	20 ~ 500N·m	0.1	1030	19.05	1165	560	395	53
	2	4 ~ 100N·m	0.02						
TCC1000N	1	50 ~ 1000N·m	0.2	1700	25.4	1885	780	510	135
	2	20 ~ 500N·m	0.1						

OPTIONAL ACCESSORIES

- Calibration Kit
- Printer EPP16M2
- Printer connecting cable (No.380)
- PC connecting cable (No.561)
- Moterdrive

DISPLAY	5.7 inch STN LCD 320×240 dots 2 colors (Blue, White) CFL Back light
SWITCH	Touch Panel
DATA MEMORY	1. Click direct reading mode Max. 2730 data with 1 measurement point×3 times Max. 1488 data with 3 measurement point×3 times Max. 780 data with 5 measurement point×5 times Max. 2340 data with 1 measurement point×5 times Max. 1170 data with 3 measurement point×5 times Max. 762 data with 3 measurement point×10 times 2. Manual mode 200 data
TORQUE WRENCH / DRIVER REGISTRATION	Torque wrench / driver registration Max. 1000 (Model name, serial number, Measuring point, Number of Measuring, accuracy, Measuring Channel, Inspector name, old measuring record) In case of Single loading direction
MEASURING MODE	Click(signal) mode / Direct reading mode / Manual mode
CHANNEL EXCHANGE	2 channel exchange switch
OK, NG JUDGMENT	Accuracy setting (1-99%), OK, NG
STATISTICALLY PROCESSING	Number of sample, Max. value, Min. value, Average (available with Manual mode)
ZERO SETTING	Automaticcally (Auto zero switch)
INTERFACE	Serial interface (RS-232) USB-interface (USB memory stick)
RESET	Manual button / Auto reset (0.1-5 sec)
OTHER FUNCTION	M button function (Data zoomed in display) Limit Switch work confirming lamp
OPERATION TEMPERATURE	0-40 degree
POWER SUPPLY	AC100V-240V 50/60Hz

ACCESSORIES

HEX WIDTH ACROSS FLAT ADAPTER	DOWN ADAPTER	RATCHET ADAPTER	OTHERS
<input type="checkbox"/> 12.7-10 · 13 · 19	DA3-2 DA4-3	RA3 RA4	Power cable Aplication software CD PC connection cable (No.561) USB memory stick
<input type="checkbox"/> 12.7-12 · 14 · 17	DA4-3	RA4	
<input type="checkbox"/> 12.7-10 · 13 · 19 <input type="checkbox"/> 12.7-12 · 14 · 17 <input type="checkbox"/> 19.05-17 · 22 · 27 <input type="checkbox"/> 19.05-19 · 24 · 30	DA4-3 DA6-4	RA4 RA6	
<input type="checkbox"/> 19.05-17 · 22 · 27 <input type="checkbox"/> 19.05-19 · 24 · 30 <input type="checkbox"/> 25.4-36 · 46 <input type="checkbox"/> 24.5-41 · 50	DA6-4 DA8-6	RA6 RA8	

TORQUE WRENCH TESTER

LC Torque Wrench Checker, Line Checker

Manual
Digital tester
Fixed type

Digital Torque Wrench Checker for Dial Inspection.

Applicable Only for Clockwise testing.



Accuracy $\pm 1\% + 1$ digit

MODEL	CAPACITY		INLET SQUARE DRIVE mm	Dimension mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	1 digit		OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	1 digit
LC20N	N·m 0.5 ~ 20	N·m 0.005	9.5	278	160	169	10.5	LC200	kgf·cm 5 ~ 200	kgf·cm 0.05
LC200N	N·m 5 ~ 200	N·m 0.05	12.7						LC2000	kgf·cm 50 ~ 2000

Note 1 : Total 99 data memory.

Note 2 : LC inspection equipment is an optional accessory

LC OPTION

PRINTER..... P.41

MODEL
EPP16M2

CONNECTING CABLE

CATALOG NO.	DESCRIPTION
(380)	LC to EPP16M2
(561)	LC to PC (D-SUB 9 pins Female)

SOFTWARE

MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

ADAPTER	
SQUARE	HEX
6.35	8,10,12,13,14,17
9.53	8,10,12,13,14,17,19,22

ADAPTER SET FOR LC

CATALOG NO.	APPLICABLE MODEL
(282)	LC20N
(280)	LC200N

BATTERY PACK

MODEL
BP-100

ST Rotary Peak Torque Meter, Spin Torque

Manual
Digital tester
Battery

Portable Battery Operated, Rotary Peak Torque Meter.
8 Hours Recharging Gives 2 hours of Continuous Use.



Accuracy F.S. $\pm 1\% + 1$ digit

MODEL	CAPACITY		SQUARE DRIVE mm	Dimension mm		WEIGHT Approx. g	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	1 digit		OVERALL LENGTH	MAX DIAMETER			MIN. ~ MAX.	1 digit
ST12N	N·m 1.2 ~ 12	N·m 0.05	9.5	75	48	250	ST120	kgf·cm 12 ~ 120	kgf·cm 0.5
ST24N	2.4 ~ 24	0.1					ST240	24 ~ 240	1
ST48N	4.8 ~ 48	0.2					ST480	48 ~ 480	2
ST120N	12 ~ 120	0.5	12.7	135	66.5	1300	ST1200	120 ~ 1200	5
ST240N	24 ~ 240	1					ST2400	2.4 ~ 24	0.1
ST480N	48 ~ 480	2					ST4800	4.8 ~ 48	0.2
ST1200N	120 ~ 1200	5					ST12000	12 ~ 120	0.5

Note 1 : Total 100 data memory.

Note 2 : Do not use with impact wrenches.

ST OPTION

INFRARED RECEIVER

MODEL
R-DT999

PRINTER..... P.41

MODEL
EPP16M2

CONNECTING CABLE

CATALOG NO.	DESCRIPTION
(379)	R-DT999 to EPP16M2
(572)	R-DT999 to PC (D-SUB 9 pins Female)

SOFTWARE

MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

OPTIONAL EXTENSION SOCKET

CATALOG NO.	APPLICABLE MODEL
(281)	ST12N
	ST24N
	ST48N
(247)	ST120N
	ST240N
(248)	ST480N
(249)	ST1200N

Note 3 : AC adapter is included for charging the unit.

Note 4 : For data transfer by infrared, use R-DT999, Data Tank.

TDT Torque Driver Tester

Manual
Digital tester
Fixed type

Digital Torque Driver Tester.
Both Clockwise and Counter-Clockwise loading.



TDT W/TDTLA

Accuracy $\pm 1\% + 1$ digit

MODEL	CAPACITY		INLET SQUARE DRIVE mm	Dimension mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	1 digit		OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	1 digit
TDT60CN	cN·m 2 ~ 60	cN·m 0.02	Hex Size 6.35mm (Male) with a groove (0.7mm).	220	220	220	13.5	TDT6	kgf·cm 0.2 ~ 6	kgf·cm 0.002
TDT600CN	cN·m 20 ~ 600	cN·m 0.2							TDT60	kgf·cm 2 ~ 60

Note 1 : Total 99 data memory.

Note 2 : TDT inspection equipment is an optional accessory.

Note 3 : Small size torque wrenches can be measured on TDT w/ loading device.

TDT OPTION

PRINTER..... P.41

MODEL
EPP16M2

CONNECTING CABLE

CATALOG NO.	DESCRIPTION
(380)	TDT to EPP16M2
(561)	TDT to PC (D-SUB 9 pins Female)

SOFTWARE

MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

LOADING DEVICE

MODEL
TDTLA

BATTERY PACK

MODEL
BP-100

RA RATCHET ADAPTER

Ratchet Adapter for Torque Wrench Tester.
Gear Action 3.75°.



MODEL	Dimension mm					ALLOWABLE TORQUE N·m	WEIGHT Approx. kg
	EXTERNAL DRIVE	INTERNAL DRIVE	HEIGHT	THICKNESS	DIAMETER		
RA3	9.5	9.5	40.5	23	62	50	0.3
RA4	12.7	12.7	49	28	90	200	0.9
RA6	19.0	19.0	65	35	125	750	2.3
RA8	25.4	25.4	86	51	190	2100	7.1
RA12	38.1	38.1	111	60	234	3000	12.6

TORQUE METER

TME Torque Meter

Manual
Digital tester
Fixed type

Digital Indicating Torque Meter for Checking Bottle Cap Tightness, Starting Torque, Strength.



Accuracy ± 1% + 1 digit

MODEL	CAPACITY		CHUCK GRIP mm	DIMENSION mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY		
	MIN. ~ MAX.	1 digit		OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	1 digit	
2TME180CN	36 ~ 180	0.2	φ 18	331	235	280	12	2-TME18	3.6 ~ 18	0.02	
2TME450CN	90 ~ 450	0.5						2-TME45	9 ~ 45	0.05	
2TME900CN	180 ~ 900	1	φ 190					2-TME90	18 ~ 90	0.1	
2TME1800CN	360 ~ 1800	2						2-TME180	36 ~ 180	0.2	
3TME9CN	1.8 ~ 9.0	0.01	φ 14	220	235	153	3.5	3-TME09	gf-cm	180 ~ 900	1
3TME18CN	3.6 ~ 18	0.02						3-TME1.8	360 ~ 1800	2	
3TME45CN	9 ~ 45	0.05	φ 110					3-TME4.5	900 ~ 4500	5	
3TME90CN	18 ~ 90	0.1						3-TME9	kgf-cm	1.8 ~ 9	0.01

Note 1 : Total 50 data memory.

Note 2 : TME inspection equipment is an optional accessory.

Note 3 : Applicable for calibration of torque driver and small size torque wrenches.

TME OPTION

PRINTER:..... P.41

MODEL
EPP16M2

CONNECTING CABLE

CATALOG NO.	DESCRIPTION
380	TME to EPP16M2
561	TME to PC (D-SUB 9 pins Female)

SOFTWARE

MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

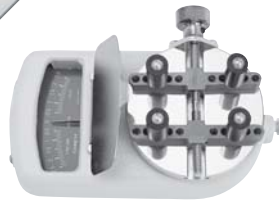
TM Torque Meter

Manual
Analog type
Fixed type

Rotation Resistance of Precision Machine and Tightening Torque of Bottle Cap Can Be Measured.



2TM~4TM



5TM

Accuracy ± 2%

MODEL	CAPACITY		CHUCK GRIP mm	Dimension mm			WEIGHT Approx. kg	MODEL	CAPACITY		
	MIN. ~ MAX.	GRAD.		OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			METRIC	English	
	MIN. ~ MAX.	GRAD.		MIN. ~ MAX.	MIN. ~ MAX.						
2TM100CN(-S)	10 ~ 100		2	331	223	133	10.5	2TM10-A-S	1 ~ 10	1~8.6	
2TM150CN(-S)	20 ~ 150							2TM15-A-S	2 ~ 15	2~13	
2TM200CN(-S)	30 ~ 200		5	φ 18				2TM20-A-S	3 ~ 20	3~17	
2TM300CN(-S)	30 ~ 300							2TM30-A-S	3 ~ 30	3~26	
2TM400CN(-S)	40 ~ 400		10	φ 190				2TM40-A-S	4 ~ 40	3~34	
2TM500CN(-S)	50 ~ 500							2TM50-A-S	5 ~ 50	4~43	
2TM600CN(-S)	60 ~ 600		10					2TM60-A-S	6 ~ 60	5~50	
2TM750CN(-S)	80 ~ 750							2TM75-A-S	8 ~ 75	7~65	
3TM10CN(-S)	1 ~ 10	0.2	0.2	252	158	105	3	3TM1-A-S	0.1 ~ 1	0.1~0.86	
3TM15CN(-S)	1.5 ~ 15	0.5						3TM1.5-A-S	0.15 ~ 1.5	0.15~1.3	
3TM25CN(-S)	2.5 ~ 25		1	φ 14				3TM2.5-A-S	0.25 ~ 2.5	0.25~2.15	
3TM50CN(-S)	5 ~ 50							3TM5-A-S	0.5 ~ 5	0.5~4.3	
3TM75CN(-S)	8 ~ 75	2	2	φ 110				3TM7.5-A-S	0.8 ~ 7.5	0.8~6.5	
4TM10MN(-S)	1 ~ 10	0.2						4TM100-A-S	10 ~ 100	0.1~0.86	
4TM15MN(-S)	1.5 ~ 15	0.5	0.5	φ 14	252	158	105	3	4TM150-A-S	15 ~ 150	0.2~1.3
4TM25MN(-S)	2.5 ~ 25								4TM250-A-S	25 ~ 250	2.5~2.15
4TM50MN(-S)	5 ~ 50	1	1	φ 110					4TM500-A-S	50 ~ 500	0.5~4.3
4TM75MN(-S)	8 ~ 75	2							4TM750-A-S	80 ~ 750	0.8~6.5

MODEL	CAPACITY		CHUCK GRIP mm	Dimension mm			WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.		OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	GRAD.
5TM1MN	mN-m	mN-m	φ 6	122	76.5	59	0.3	5-OT10	gf-cm	2~10
5TM1.5MN	0.2~1	0.05						5-OT15	2~15	0.5
5TM2.5MN	0.5~2.5	0.1	φ 58					5-OT25	5~25	1
5TM5MN	1 ~ 5	0.2						5-OT50	10~50	2
5TM7.5MN	1 ~ 7.5		5-OT75	10~75						

Note 1 : 5TM models are provided without memory pointer.

Note 2 : S.I. Models have single scale, and -A-S models have dual scale.

Note 3 : Applicable for calibration of torque driver

TORQUE METER

ATG/BTG Torque Gauge



Manual
Direct reading
Portable

Hand Held Type Torque Gauge for Micro Torque Measurement and Torque Tool Inspections.

A Three-Jaw Chuck Firmly Grasps Object with a 270 Degree Turning Range.



ATG



BTG

Accuracy $\pm 2\%$

MODEL	CAPACITY		CHUCK GRIP mm	Dimension mm		WEIGHT Approx. kg	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.		OVERALL LENGTH	DIAMETER			MIN. ~ MAX.	GRAD.
ATG045CN	0.05 ~ 0.45	0.01	1~ ϕ 6.5	78	43.5	0.18	45ATG	5 ~ 45	1
ATG09CN-S	0.1 ~ 0.9	0.02					90ATG-S	10 ~ 90	2
ATG1.5CN-S	0.2 ~ 1.5						150ATG-S	20 ~ 150	
ATG3CN-S	0.3 ~ 3	0.05					300ATG-S	30 ~ 300	5
ATG6CN-S	0.6 ~ 6	0.1					600ATG-S	60 ~ 600	10
ATG12CN-S	1 ~ 12	0.2					1200ATG-S	100 ~ 1200	20
ATG24CN-S	3 ~ 24	0.5					2400ATG-S	300 ~ 2400	50
BTG15CN-S	2 ~ 15	0.2					1~ ϕ 8.5	134	64.2
BTG24CN-S	3 ~ 24	0.5	2.4BTG-S	0.3 ~ 2.4	0.05				
BTG36CN-S	4 ~ 36		3.6BTG-S	0.4 ~ 3.6					
BTG60CN-S	6 ~ 60	1	6BTG-S	0.6 ~ 6	0.1				
BTG90CN-S	10 ~ 90		9BTG-S	1 ~ 9					
BTG150CN-S	20 ~ 150		2	15BTG-S		2 ~ 15			

Note 1 : ATG045CN and 45ATG models are provided without memory pointer on dial face.

Note 2 : Without memory pointer models are available.
Remove "-S" from model name, for example 2400ATG.

Note 3 : All plastic chuck, fingers and collar for ATG is available as an optional accessory.

CATALOG NO.	APPLICABLE MODEL
322	All Plastic Chuck for ATG

TORQUE SENSOR

TCF Reaction Torque Sensor

Fixed type

Fixed Type Torque Sensor for Measurement of Torque Tools and Nutrunner Check.



CD42. DISPLAY

MODEL	CAPACITY	Dimension mm			WEIGHT Approx. kg
	MIN. ~ MAX.	INLET	HEIGHT	DIAMETER	
	N·m				
TCF02N	0.02 ~ 0.2	6.35	56	45	0.45
TCF04N	0.04 ~ 0.4				
TCF1N	0.1 ~ 1				
TCF2N	0.2 ~ 2	6.35	62.5	45	0.5
TCF4N	0.4 ~ 4				
TCF10N	1 ~ 10	9.5	66	70	0.6
TCF20N	2 ~ 20				
TCF40N	4 ~ 40				
TCF100N	10 ~ 100	12.7	100	105	2.5
TCF200N	20 ~ 200				
TCF400N	40 ~ 400	19.0	145	140	6.0
TCF1000N	100 ~ 1000				
TCF2000N	200 ~ 2000	25.4	180	178	12.0

Note 1 : Display CD42 is sold separately. See page 39.

Note 2 : Not available for impact and impulse wrenches.

TCR Rotary Torque Sensor

Rotary

Rotary Torque Sensor for Measurement of Rotating Object.



CD42. DISPLAY

MODEL	CAPACITY	PERMISSIBLE ROTATION r.p.m.	Dimension mm			WEIGHT Approx. kg
	MIN. ~ MAX.		SQUARE DRIVE	HEIGHT	WIDTH	
	N·m					
TCR18N	1.8 ~ 18	2000	9.5	91	76	0.9
TCR180N	18 ~ 180		12.7	104	83	1.3
TCR700N	70 ~ 700	1000	19.0	118.5	95	2.0
TCR1800N	180 ~ 1800		25.4	138.5	110	3.6

Note 1 : Display CD42 is sold separately. See page 39.

Note 2 : Not available for impact and impulse wrenches.

TP/TTF/DTF TCF Related Tools

Attachment for TCF Models to Measure Precise Torque.



TCF + TP



TCF + DTF



TCF + ATF + TTF

TP TEST PIECE

MODEL	CAPACITY	ADAPTING TCF	INLET mm		Dimension mm		WEIGHT Approx. kg
	MIN. ~ MAX.		OPPOSITE SIZE	SCREW	DIAMETER	HEIGHT	
	N·m						
TP2.5N	0.25 ~ 2.5	TCF02N ~ TCF4N	8	M4	18	58	0.08
TP18N	1.8 ~ 18	TCF10N, TCF20N	13	M6	35	83.5	0.27
TP180N	18 ~ 180	TCF40N ~ TCF200N	24	-	65	148	1.9
TP1800N	180 ~ 1800	TCF400N ~ TCF2000N	50	-	140	297.5	16.8

DTF DRILL CHUCK

MODEL	ADAPTING TCF	CHUCK GRIP mm	Dimension mm	
			DIAMETER	HEIGHT
DTF5-3	TCF02N ~ TCF4N	φ5	33	65
DTF5-2	TCF10N ~ TCF40N			61

TTF TABLE/ATF TABLE ATTACHMENT

MODEL		ADAPTING TCF	CHUCK GRIP	DIAMETER
TTF	ATF			
TTF7	ATF18-2	TCF02N ~ TCF4N	φ10 ~ 70	70
TTF11	ATF180	TCF10N ~ TCF20N	φ14 ~ 110	110
TTF19	ATF18-2	TCF2N ~ TCF4N	φ18 ~ 190	180
	ATF180	TCF10N ~ TCF20N		

Note : ATF attachment is required to fix TTF table to TCF model.

CD42 COMPACT DISPLAY

Display Torque Measured by Strain Gauge Sensor.



DISPLAY	5digit, Fluorescent display tube
RESOLUTION	±1/2000
INPUT SIGNAL	0.5~3mV/V
INPUT SIGNAL	5V
ACCURACY	Non-linearity 0.05%F.S. Zero drift : within 0.5 μV/C Gain drift : within 0.01%/C
GAIN	Gain adjustment by digital method
ADJUSTMENT	Equivalent input calibration/Actual loaded calibration
MEMORY	99 data
EXTERNAL OUTPUT	RS232C output, Analog output, HI, OK, LO relay point output
POWER SOURCE	AC100~AC240V
DIMENSION	150(W)×200(D)×92(H)mm
WEIGHT	1.7kg

CD42 OPTION

PRINTER..... P.41

MODEL
EPP16M2

CONNECTING CABLE

MODEL	DESCRIPTION
380	CD42 to EPP16M2
561	CD42 to PC (D-SUB 9 pins Female)

SOFTWARE

MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

EM250 TORQUE CONTROLLER

Digital Controller with Capability to Control Up-To Four Spindle Nutrunners.



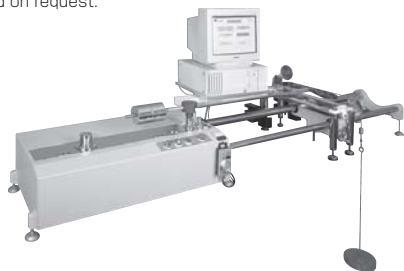
DISPLAY	4 Figures, LED Display
CHANNEL	1ch(up to 4ch)
ACCURACY	±1%+1Digit
ADJUSTMENT	Auto Zero Adjustment
RESULT EVALUATION	Hi-NG, OK, Lo-NG
CONTROL RELAY OUTPUT	T≥T Set
DATA INPUT	Keyboard
RESET	Manual/Auto, Remote Available
OUTPUT	RC232C(Optional)
DIMENSION	210×430×370mm
WEIGHT	8.4kg

CALIBRATION KIT

For TF models

MODEL	COMPONENT			OPTION		APPLICABLE MODEL
	CALIBRATION LEVER/ADAPTER	CALIBRATION STAND	CALIBRATION WIRE	SCALE HOLDER/WEIGHT	MODEL	
TFTCL200N	LEVER 2pcs. ADAPTER 2pcs.	1 SET	WIRE × 2	HOLDER 100g × 1, 1kg × 1, 5kg × 1 WEIGHT 1kg × 1, 2kg × 2, 5kg × 7	TF200N	
TFTCL500N	LEVER 2pcs. ADAPTER 2pcs.		WIRE × 2	HOLDER 500g × 1, 1kg × 1, 5kg × 1 WEIGHT 1kg × 1, 2kg × 2, 5kg × 15	TF500N	
TFTCL1000N	LEVER 3pcs. ADAPTER 2pcs.		WIRE × 2	HOLDER 100g × 1, 1kg × 1, 5kg × 1 WEIGHT 1kg × 1, 2kg × 2, 5kg × 19	TF1000N	
TFTCL2000N	LEVER 3pcs. ADAPTER 2pcs.		WIRE × 4	HOLDER 500g × 1, 1kg × 1, 5kg × 1 WEIGHT 1kg × 1, 2kg × 2, 5kg × 25	TF2000N	
TFTCL3000N	LEVER 3pcs. ADAPTER 1pcs.		WIRE × 6	HOLDER 1kg × 1, 5kg × 1 WEIGHT 1kg × 1, 2kg × 2, 5kg × 25	TF3000N	

Note : Supplied on request.



For TM and TME models

MODEL	COMPONENT	APPLICABLE MODEL
2TMTCL	Wire × 1, Roller × 1, Calibration frame × 1, Bolt × 2, Scale holder 1kg × 1, Scale pan 100g × 1	2TM 2TME
3TMTCL	Wire × 1, Roller × 1, Calibration frame × 1, Bolt × 2, Scale pan 100g × 1 + 50g × 1	3TM, 4TM 3TME



For DOT and DOTE models

MODEL	COMPONENT			OPTION			APPLICABLE MODEL
	CALIBRATION LEVER	CALIBRATION STAND	REACTION UNIT	SCALE HOLDER WITH FOOT	WOODEN BOX FOR LOWER	WOODEN BOX FOR FOOT	
DOTCL36N	KL-DOTCL36N	KS-DOTCL	RU-DOTCL100N	WT0.5	KLB36N	WTB36N	DOT35N DOT50N DOTE20N DOTE36N
DOTCL100N	KL-DOTCL100N						WT1
DOTCL200N	KL-DOTCL200N		RU-DOTCL360N	WT5	KLB360N KLB700N	WTB700N	
DOTCL360N	KL-DOTCL360N						RU-DOTCL700N
DOTCL700N	KL-DOTCL700N		DOT700N DOTE700N				
DOTCL1000N	KL-DOTCL1000N			DOTE1000N			



For TG models

MODEL	COMPONENT	APPLICABLE MODEL
ATGTCL24CN	Main Unit, Calibration Pulley × 2 Calibration Wire × 2, Scale Pan (5 and 100g)	ATG models
BTGTCL150CN	Main Unit, Calibration Pulley × 2 Calibration Wire × 3, Scale Pan (5 and 100g)	BTG models



For TDT models

MODEL	COMPONENT	APPLICABLE MODEL
TDTCL60CN	Calibration lever × 1, Wire × 1, Roller × 1, Scale pan 100g × 1, Scale holder 1kg × 1	TDT60CN
TDTCL600CN	Calibration lever × 1, Wire × 1, Roller × 1, Scale pan 100g × 1, Scale holder 1kg × 1	TDT600CN



For TCL models

MODEL	COMPONENT	APPLICABLE MODEL
TCL50N	LEVER × 1, WIRE × 1 HOLDER 1kg × 1, Scale pan 100g × 1	LC20N, ST24N, ST12N TCF40N, TCF20N, TCF10N, TCR18N
TCL200N	LEVER × 1, WIRE × 1 HOLDER 1kg × 1	LC200N, ST240N, ST120N, ST48N TCF200N, TCF100N, TCR180N
TCL800N	LEVER × 1, WIRE × 1 HOLDER 1kg × 1	ST480N, TCF400N, TCR700N
TCL2000N	LEVER × 1, WIRE × 1 HOLDER 1kg × 1	ST1200N, TCF2000N, TCF1000N TCR1800N

Note 1 : TCL2000N model is supplied on request.



Weights

MODEL	WEIGHT
WP-TCL5	5kg
WP-TCL2	2kg
WP-TCL1	1kg
WS-TCL2	Combination weights

DATA PROCESSING

EPP16M2 PRINTER

Dot Impact Printer for Digital Torque Instruments.



MODEL	SPEC.
INPUT SIGNAL	RS232C I/F
APPLICABLE MODEL	CD42, TME, TDT, LC, DOTE, R-DT100-3, CEM2, CTA, CTB, CEM3, TCC
PRINTING METHOD	Dot impact method
PRINTING SPEED	2.5 line/sec.
LINE SPACE	3dot, line base
NUMBER OF PRINTED DIGITS	Standard letter 16 (letter/line)
CHARACTER SIZE	2.6mm (H) × 1.7mm (W)
PAPER	57.5mm roll paper
INK RIBBON	Ribbon cassette method
POWER SOURCE	AC adapter DC9V 2A
DIMENSION	106 × 144 × 60mm (W.D.H.)
WEIGHT	Approx. 400g (body)
ENVIRONMENTAL CONDITION	Operating temperature : +5°C ~ +45°C Storage temperature : -10°C ~ +70°C
ACCESSORIES	AC adapter 1pc. Rolled paper 1pc. Ribbon Cassette 1pc.

EPP16M2 OPTION

MODEL	DESCRIPTION	MODEL	DESCRIPTION
(408)	ROLL PAPER	(409)	RIBBON CASSETTE

CONNECTING CABLE

MODEL	DESCRIPTION
(378)	Cable for CTA and CTB
(379)	Cable for CEM2
(380)	Cable for CD42, TME, TDT, LC, DOTE and R-DT100-3
(381)	Cable for EPP16M to EPP16M2

R-DT999 DATA TANK

Interface Data Transfer by Infrared.



MODEL	SPEC.
DATA INPUT	Infrared data input
DISPLAY	7segLED 4 fig, 14segLED 6 fig, 7segLED
APPLICABLE MODEL	CEM2, CTB, CTA, ST, STC, CEM3
DATA OUTPUT	RS232C I/F (correspondent to USB1.1)
Power Source	AC adapter DC 3V 300mA
OPERATING CONDITION	0 ~ 40°C

R-DT100-3 OPTION

PRINTER		SOFTWARE	
MODEL		MODEL	DESCRIPTION
EPP16M2		DFS	DATA PROCESSING SOFTWARE

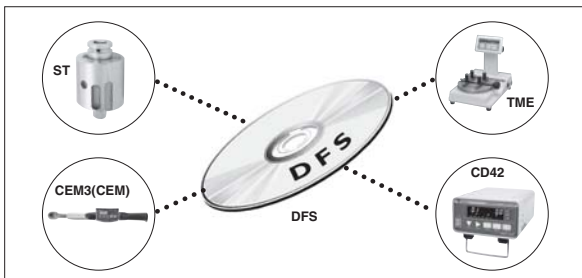
CONNECTING CABLE

MODEL	DESCRIPTION
(379)	R-DT999 to EPP16M2
(595)	CEM2/CEM3/R-DT999 to PC (D-SUB 9 pins Female)
(561)	R-DT999 to PC, 9 pins Female

DFS DATA PROCESSING SOFTWARE

Data Collection Software.

- Maximum Value
- Standard Deviation
- Minimum Value
- Cp Value
- Average
- Histogram



BASIC REQUIREMENT OS : Microsoft Windows 98, 2000, XP
Memory : More than 64MB

Note : Connecting cable is an optional accessory.

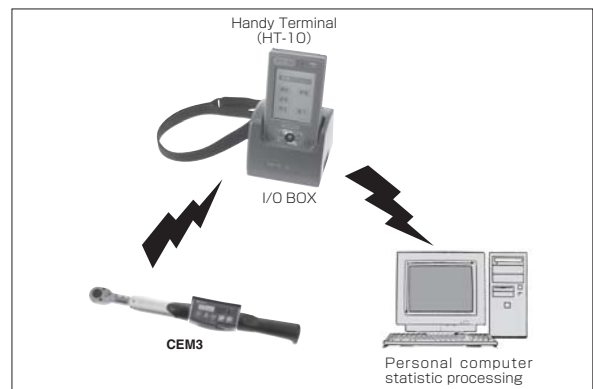
INTERFACE CABLE TO PERSONAL COMPUTER

MODEL	DESCRIPTION
(575)	CEM2, CEM3, R-DT999 → PC (D-SUB 9 pins Female)
(561)	DOTE, LC, TDT, TME, CD42, TCC → PC (D-SUB 9 pins Female)
(579)	CTA, CTB → PC (D-SUB 9 pins Female)
(584)	CEM3, R-DT999 → PC (USB A Connector)

HT-10 トルクデータ収集装置 (ハンディターミナル)

Datafile System is the system to make a judgment either OK or NG of measured torque value by Data torque at the same time to transfer measured data through I/O box by infrared from Handy Terminal when Operation completed

Transferred data can be processed statistically by yourself with software such as Excel



Note 1 : Available upon request

Note 2 : Application should be discussed before installing this system, price will be depending on its Specification

BOLT TENSION METER

BTM/B-BTM Bolt Tension Meter

Hydraulic
Bourdon tube
Direct reading

Direct Measurement of Bolt Tension to Determine Optimum Tightening Torque.

Accuracy $\pm 3\%$



BTM



B-BTM

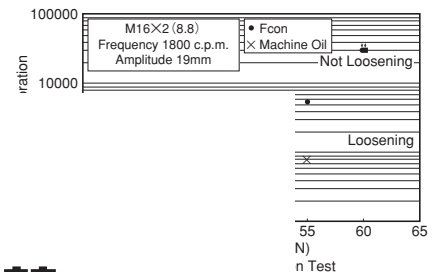
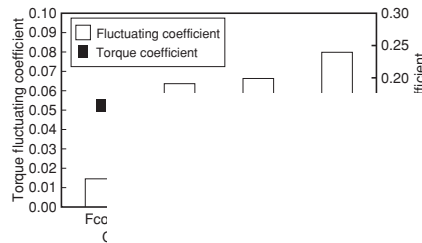
MODEL	CAPACITY		MEASURING BOLT DIAMETER (MIN. LENGTH) mm	Dimension			WEIGHT Approx. kg	MODEL Metric	CAPACITY			
	MIN. ~ MAX.	GRAD.		OVERALL WIDTH	OVERALL THICKNESS	OVERALL HEIGHT			MIN. ~ MAX.	GRAD.		
BTM400K	100 ~ 400	kN	5	HIGH TENSION BOLT M16 (70), M20 (75), M22 (80), M24 (85)	260	64	280	12.6	40BTM-2	4	~40	0.5
B-BTM13K	1.2 ~ 13	0.2	STANDARD BOLT M5 (20), M6 (21), M7 (22), M8 (23)	106	78	217	7.7	1.3B-BTM	0.12 ~ 1.3	0.02		
B-BTM40K	4 ~ 40	0.5	STANDARD BOLT M10 (29), M12 (31), M14 (32)	134	82	241	9.8	4B-BTM	0.4 ~ 4	0.05		
B-BTM130K	12 ~ 130	2	STANDARD BOLT M16 (41), M18 (43), M20 (44), M24 (47)	186	106	287	17.5	13B-BTM	1.2 ~ 1.3	0.2		
B-BTM400K	40 ~ 400	5	STANDARD BOLT M27 (72), M30 (74), M36 (79), M42 (84)	280	126	369	31.0	40B-BTM	4 ~ 40	0.5		

BTM OPTIONAL PARTS FOR BTM

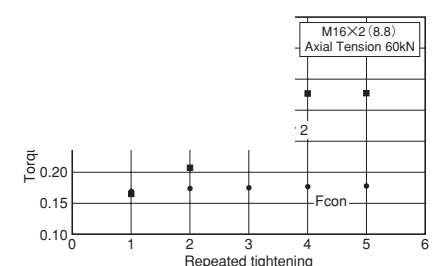
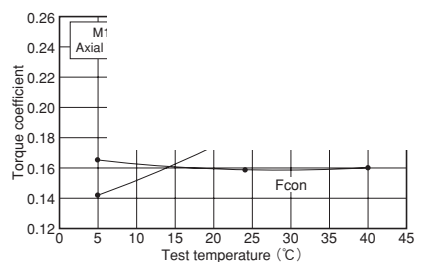
BUSHING FOR HIGH TENSION BOLT		BUSHING FOR TORSIA BOLT		PLATE FOR HIGHTENTION AND TORSIA BOLT	
NO.	APPLICABLE BOLT	NO.	APPLICABLE BOLT	NO.	APPLICABLE BOLT
650	M16	654	M16	658	M16
651	M20	655	M20	659	M20
652	M22	656	M22	660	M22
653	M24	657	M24	661	M24

Fcon Bolt Tension stabilization "Fcon".

By Applying a Proper Quantity to Screw, the Characteristic of Tension Stabilization of the World Highest Level is Attained. Give the Most Stable Friction Coefficient to Get Right Tightening Force.



差替



MODEL
Fcon

BOLT TENSION METER

TT2000 ULTRASONIC TIGHTENING TESTER

Ultrasonic

Measuring Axial Bolt Tension and Determining Tightening Torque.



MODEL	DESCRIPTION
Measurement Range	5~10000mm for Steel material
Applicable Bolt Length	50~9000mm
Applicable Bolt Diameter	6mm Dia, or more
Ultrasonic Wave Frequency	0.5~15MHz
Time Axis Resolution	5ns, 200MHz Correspond
Result of Measurement	Bolt initial length (mm), Traveling Time (μS) Bolt axial force (MPa), Elongation (mm) Decided by bolt diameter and length.
Axial Force measurement	Example, measuring of first base echo, A : φ 10 diameter bolt with 50mm tightening length - approx. 1.47kN B : φ 20 diameter bolt with 100mm tightening length - approx. 2.94kN
Memory	Total 1500
Bolt temperature Correction	Manual input by key
Display Screen	Color, TFT6.4 type 640 × 480 dots
External Output	8 bits serial interface, RS232C
Power Source	AC85~130V, AC185~265V
Battery	2.5 hours / portable battery, 8 hours / optional built-in battery.
Operating Condition	0~45°C
Dimensions	160 H × 246 W × 60 D, main unit
Weight	1.2kg, main unit

Note 1 : Auto temperature compensation is available to connect optional thermometer on TT2000C and TT2000M in the limit of -40°C~200°C. Measurement at 60°C and more requires the sensor for high temperate.

Note 2 : Communication function by RS232C is available only for TT2000C and TT2000M.

Note 3 : Composite output, alarm output encoder input are available to use multi connector box supplied for TT2000M or battery built-in case for option.

Note 4 : DC12V is only available to use with portable battery or battery built-in case of option.

ULTRASONIC TIGHTENING TESTER

MODEL
TT2000
TT2000C
TT2000M

TT OPTION



- Features of ultrasonic wave sensor -

- 1 The magnetic holder provides stabilized force through the sensor, which would provide high reproducibility measurement.
- 2 The Bolt holder gives same position of sensor to support accurate measurement.

MODEL	DESCRIPTION
AFC-20G	Axial Force Calibration

MODEL	DESCRIPTION	APPLICABLE BOLT
606	5C4.8N	More than M6, L1<80mm
607	5C6.4N	More than M8, L1<50cm
608	5C12.7N	More than M14, L1<2mm
609	5C19.1N	More than M20, L1<4mm

Note 1 : L1 is standard bolt length with material in SCM, S-C or ST-ST for ultrasonic wave reflection measurement n=1.

Note 2 : Ultrasonic wave sensor is consisting of 3 parts, Sensor, Magnet Holder and Bolt Holder.

Note 3 : Standard 5C6.4N does not include bolt holder.

Note 4 : 5C6.4N= [5 : Frequency (MHZ)]
[C : Oscillator Material (C : piezoelectric ceramics)]
[6.4 : Oscillator Diameter, mm]
[N : Perpendicular (Normal)]

FORCE MEASURING

FP FORCEPEN

Digital display separate

Pen Type Force Sensor.



CD42. DISPLAY

MODEL	CAPACITY	RATED OUTPUT	ACCURACY	PERMISSIBLE OVERLOAD	DISPLAY (OPTION)	WEIGHT Approx.	ACCESSORY
	MIN. ~ MAX.						
	N						
FP1	±0.1 ~ 1	1mV/V	±1% F.S.	150%	CD42	80g	Standard Attachment
FP2	±0.2 ~ 2						
FP4	±0.4 ~ 4						
FP10	±1 ~ 10						
FP20	±2 ~ 20						
FP40	±4 ~ 40						

Note : Display CD42 is sold separately. See page 39.

FG FORCE GRIP

Digital display separate

Grip Type Force Sensor.



FG



CD42. DISPLAY

MODEL	CAPACITY	RATED OUTPUT	ACCURACY	PERMISSIBLE OVERLOAD	DISPLAY (OPTION)	WEIGHT Approx.	ACCESSORY
	MIN. ~ MAX.						
	N						
FG40	± 4 ~ 40	2mV/V	±1% F.S.	150%	CD42	580g	Standard Attachment
FG100	±10 ~ 100						
FG200	±20 ~ 200						
FG400	±40 ~ 400						

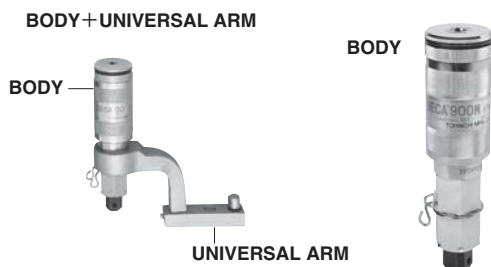
Note : Display CD42 is sold separately. See page 39.
FG is available upon request

FORCE MEASURING

DECA 10:1 Ratio

Manual

Torque Multiplier in 10:1 Ratio, Allowing Large Torque to be Obtained with a Small Torque Wrench.



Accuracy $\pm 5\%$

MODEL	OUTPUT TORQUE MIN. ~ MAX.	TORQUE RATIO	Dimension mm				WEIGHT Approx. kg	OUTPUT TORQUE MIN.~MAX. kgf·m	UNIVERSAL ARM (OPTION)
			OVERALL LENGTH	DIAMETER	OUTPUT SQ. DRIVE	INPUT SQ. DRIVE			
DECA450N	90 ~ 450	10:1	195	52	19.0	9.5	2.0	9 ~ 45	UA450N
DECA900N	180 ~ 900		241	63	25.4	12.7	3.4	18 ~ 90	UA900N
DECA1800N	360 ~ 1800		270	78			5.7	36 ~ 180	UA1800N
DECA3000N	600 ~ 3000		324	95	31.75	19.0	10	60 ~ 300	UA3000N
DECA4500N	900 ~ 4500		367	110	38.1		12.5	90 ~ 450	UA4500N
DECA9000N	1800 ~ 9000		464	140	50.8	25.4	34	180 ~ 900	UA9000N
DECA18000N	3600 ~ 18000		540	172	63.5		60	360 ~ 1800	UA18000N

Note : Universal arm is sold separately.

ACCESSORIES : DECA450N~DECA3000N in Steel Case
DECA4500N~DECA9000N in Steel, Carrying Case
DECA18000N in Steel Case with Caster

RPTM ROPE TENSION METER

Direct reading
Beam

For Measuring Wire and Rope Tension.



Accuracy $\pm 10\%$

MODEL	MEASURING RANGE		OVERALL LENGTH mm	DIAMETER OF ADAPT WIRE, ROPE (REF.) mm	WEIGHT Approx. kg	MODEL Metric	MEASURING RANGE	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
RPTM2500	N 500 ~ 2500	N 100	375	3.15, 4, 5	0.7	RPTM250	kgf 50 ~ 250	kgf 10
RPTM5000	1000 ~ 5000	200	445	5, 6, 3	1.1	RPTM500	100 ~ 500	20
RPTM10000	2000 ~ 10000	200	535	8, 9, 10	1.7	RPTM1000	200 ~ 1000	20
RPTM20000	4000 ~ 20000	500	700	11.2, 12.5, 14	2.9	RPTM2000	400 ~ 2000	50

Note 1 : Tell us measuring rope diameter, tension.

Note 2 : Contact us if you measure other than steel wire.

Note 3 : This unit is designed for tension not torque. Do not use as torque wrench.

Note 4 : RPTM is available upon request.

SA REACTION ARM

Light Weight Reaction Arm



MODEL	CAPACITY	STANDARDS SOCKETS LENGTH
SA400N	400N·m	50
SA700N	700N·m	62
SA1200N	1200N·m	62

UA UNIVERSAL REACTION ARM

Universal Reaction Arm



MODEL	WEIGHT Approx. kg
UA450N	1.2
UA900N	2.6
UA1800N	4
UA3000N	7.2
UA4500N	10.9
UA9000N	18
UA18000N	—

Note : UA900N, UA18000N are available upon request.

RELATION FIGURE OF SCREW AND TORQUE

(Torque coefficient $K=0.2$)

Calculation formula

$$T = K \cdot d \cdot F_t$$

$$A = \frac{\pi}{4} \cdot d_2^2$$

$$\sigma = \frac{F_t}{A}$$

T : Tightening torque $N \cdot m$ ($kgf \cdot cm$)

K : Torque coefficient 0.2 ($\mu \approx 0.15$)

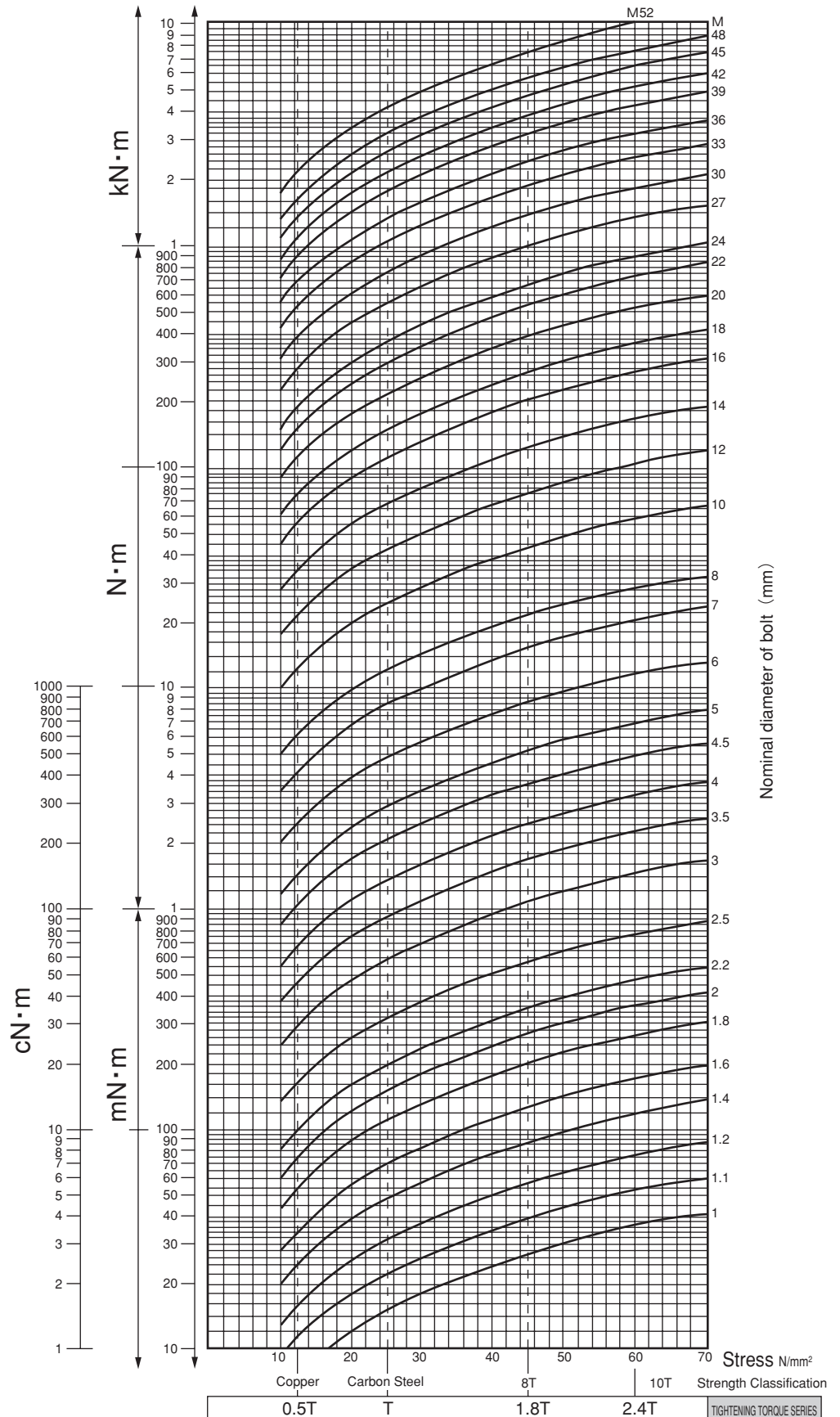
d : Nominal diameter of bolt mm

F_t : Axial tension N (kgf)

A : Stress area of bolt mm^2

d_2 : Pitch diameter of bolt mm

σ : Tensile stress of bolt N/mm^2 (kgf/mm^2)



STANDARD TIGHTENING TORQUE

STANDARD TIGHTENING TORQUE N·m

STANDARD TIGHTENING TORQUE kgf·cm

NOMINAL SIZE OF SCREW	T	0.5T	1.8T	2.4T
	N·m	N·m	N·m	N·m
M1	0.0195	0.0098	0.035	0.047
(M1.1)	0.027	0.0135	0.049	0.065
M1.2	0.037	0.0185	0.066	0.088
(M1.4)	0.058	0.029	0.104	0.140
M1.6	0.086	0.043	0.156	0.205
(M1.8)	0.0128	0.064	0.230	0.305
M2	0.176	0.088	0.315	0.42
(M2.2)	0.230	0.116	0.41	0.55
M2.5	0.36	0.180	0.65	0.86
M3	0.63	0.315	1.14	1.50
(M3.5)	1.00	0.50	1.80	2.40
M4	1.50	0.76	2.70	3.6
(M4.5)	2.15	1.08	3.9	5.2
M5	3.00	1.50	5.4	7.2
M6	5.2	2.60	9.2	12.2
(M7)	8.4	4.2	15.0	20.0
M8	12.5	6.2	22.0	29.5
M10	24.5	12.5	44	59
M12	42	21.0	76	100
M14	68	34	122	166
M16	106	53	190	255
(M18)	146	73	270	350
M20	204	102	370	490
(M22)	282	140	500	670
M24	360	180	650	860
(M27)	520	260	940	1240
M30	700	350	1260	1700
(M33)	960	480	1750	2300
M36	1240	620	2250	3000
(M39)	1600	800	2900	3800
M42	2000	1000	3600	4800
(M45)	2500	1260	4500	6000
M48	2950	1500	5300	7000
(M52)	3800	1900	6800	9200
M56	4800	2400	8600	11600
(M60)	5900	2950	10600	14000
M64	7200	3600	13000	17500
(M68)	8800	4400	16000	21000

NOMINAL SIZE OF SCREW	T	0.5T	1.8T	2.4T
	kgf·cm	kgf·cm	kgf·cm	kgf·cm
M1	0.199	0.100	0.357	0.479
(M1.1)	0.275	0.138	0.500	0.663
M1.2	0.377	0.189	0.673	0.897
(M1.4)	0.591	0.296	1.06	1.43
M1.6	0.877	0.438	1.59	2.10
(M1.8)	1.31	0.653	2.35	3.11
M2	1.79	0.897	3.21	4.28
(M2.2)	2.35	1.17	4.18	5.61
M2.5	3.67	1.84	6.63	8.77
M3	6.42	3.21	11.6	15.3
(M3.5)	10.2	5.1	18.4	24.5
M4	15.3	7.6	27.5	36.7
(M4.5)	21.9	11.0	39.8	53.0
M5	29.4	14.7	53.0	70.6
M6	53.0	26.5	93.8	124
(M7)	85.7	42.8	153	204
M8	127	63.2	224	301
M10	250	127	449	602
M12	428	214	775	1020
M14	693	347	1240	1690
M16	1080	540	1940	2600
(M18)	1490	744	2750	3570
M20	2080	1040	3770	5000
(M22)	2880	1430	5100	6830
M24	3670	1840	6630	8770
(M27)	5300	2650	9590	12600
M30	7140	3570	12800	17300
(M33)	9790	4890	17800	23500
M36	12600	6320	22900	30600
(M39)	16300	8160	29600	38700
M42	20400	10200	36700	48900
(M45)	25500	12800	45900	61200
M48	30100	15300	54000	71400
(M52)	38700	19400	69300	93800
M56	48900	24500	87700	118000
(M60)	60200	30100	108000	143000
M64	73400	36700	133000	178000
(M68)	89700	44900	163000	214000

Standard axial stress 210 N/mm² stress area of bolt(JIS 10B2)

Note : This is not converted from standard tightening torque kgf·cm.

This is converted from Standard tightening torque N·m.

Screws and applicable T series

	Standard T series	0.5 T series	1.8 T series	2.4 T series
Screws (Strength) (Material)	4.6~6.6 SS SC	— CR(Brass) CB(Copper) AB(Aluminum)	8.8~12.9 SCr SNC SCM	10.9~12.9 SCr SNC SCM SNCM
Axial stress Standard value kgf/mm ² (N/mm ²) Max.~Min.	25(210) 36~19.0(300~160)	12.5(105) 18.0~9.5(150~80)	45(380) 64~35(540~290)	60(500) 86~46(710~380)
Application	To be applied to ordinary screws, unless otherwise specified.	Male and female screws with copper, aluminum or plastic, for die-cast plastic products.	Durable screw joints made of special steel including those affected by additional dynamic loads.	Durable screw joints made of special steel including those bearing static loads only. (Friction clamping)
(Applicable products)	Ordinary products	Electronic products.	Vehicles, Engines	Construction products

UNIT OF TORQUE AND CONVERSION VALUE

To measure the tightening torque for screws, kgf·cm has often been used in the past. This becomes N·m in terms of SI units. Therefore, their relationship is given as:

$$1\text{N}\cdot\text{m}=10.1972\text{kgf}\cdot\text{cm}\approx 10.2\text{kgf}\cdot\text{cm}$$

$$1\text{kgf}\cdot\text{cm}=0.0980665\text{N}\cdot\text{m}\approx 0.098\text{N}\cdot\text{m}$$

	SI Unit System			Metric Unit System			English Unit System		
	mN·m	cN·m (N·cm)	N·m	gf·cm	kgf·cm	kgf·m	ozf·in	lbf·in	lbf·ft
1mN·m=	1	0.1	0.001	10.2	0.0102	0.000102	0.142	0.00885	0.000738
1cN·m=	10	1	0.01	102	0.0102	0.00102	1.42	0.0885	0.00738
1N·m=	1000	100	1	10200	10.2	0.102	142	8.85	0.738
1gf·cm=	0.0981	0.00981	0.000981	1	0.001	0.00001	0.0139	0.000868	0.0000723
1kgf·cm=	98.1	9.81	0.0981	1000	1	0.01	13.9	0.868	0.0723
1kgf·m=	9810	981	9.81	100000	100	1	1390	86.8	7.23
1ozf·in=	7.06	0.706	0.00706	72	0.072	0.00072	1	0.0625	0.00521
1lbf·in=	113	11.3	0.113	1150	1.15	0.0115	16	1	0.0833
1lbf·ft=	1360	136	1.36	13800	13.8	0.138	192	12	1

On above table effective number is treated as 3 figures.

BOLT TIGHTENING ASSURANCE SYSTEM

—FROM TORQUE CONTROL TO TIGHTENING ASSURANCE SYSTEM—

TIGHTENING ASSURANCE

1. Tohnichi Torque Assurance System advises the users how to tighten bolts properly and how to eliminate various mistakes which occur during bolt tightening.
2. Four major errors during bolt tightening:

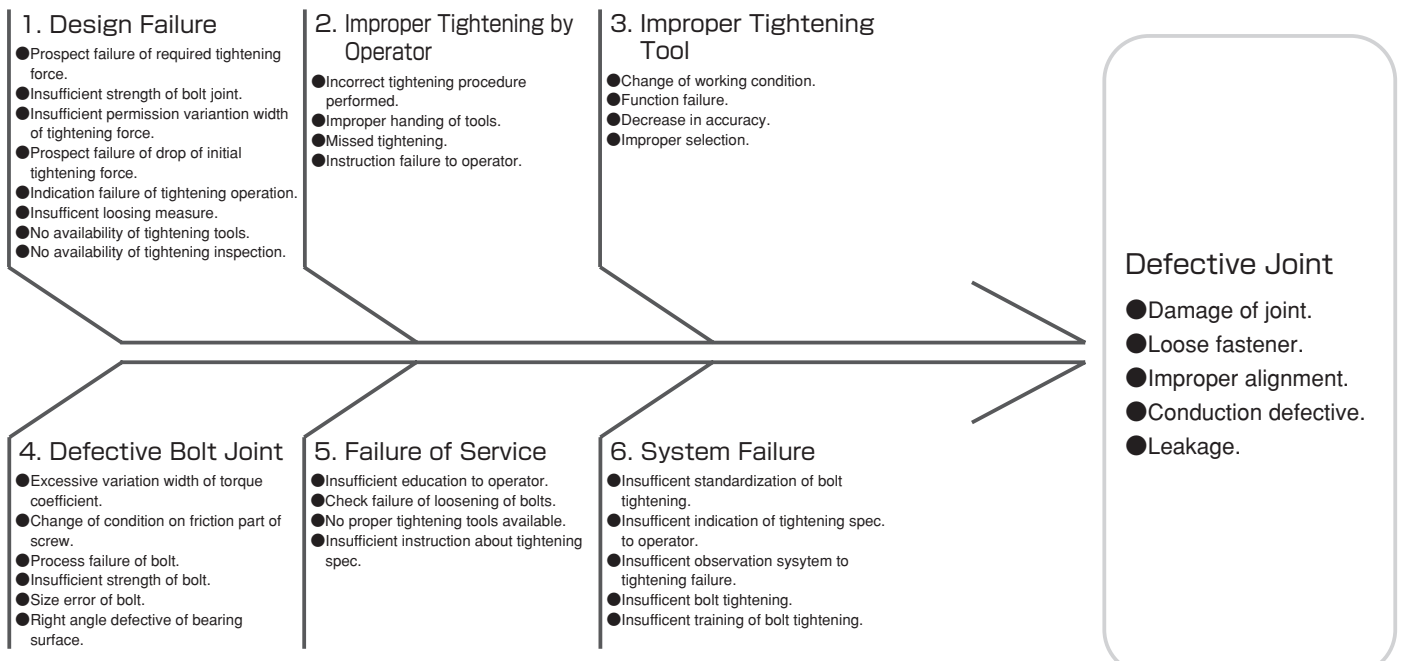
1) Human Errors	Forgot to tighten · Improper tools used
2) Tightening Method Errors	Wrong specifications · Wrong tightening procedure · Wrong selection of tools
3) Improper Tool Errors	Inaccuracy · Mechanical failure
4) Joint Parts Errors	Out of parts tolerance · Bad material · Insufficient lubrication

3. Total Tightening Management System, which completes tightening assurance, will be created through cooperation of your staff. Each component and product which consists of the system can be sold separately. The components and products are described in the catalog.

CLASSIFICATION AND CAUSE FOR LOOSENING OF BOLTS

	CLASSIFICATION	CAUSE
Bolt Loosening without bolt-turning	1. Initial loosening	Uneven contact surface becomes flat
	2. Subsidence seating	Plastic deformation of bearing surface
	3. Micro-friction loosening	Friction by lateral displacement of contact surface
	4. Loosening by permanent deformation of sealing material	Setting of the gasket
	5. Loosening by over-tightening	Progress of plastic deformation of bolt
	6. Loosening by heat	Variation of internal stress over recrystallization temperature, different thermal expansion of joint members
Bolt loosening with bolt-turning	7. Loosening by lateral external force	Relative displacement of bearing surface and threaded part
	8. Loosening by axial external force	
	9. Loosening by lateral dynamic force	
	10. Loosening by axial dynamic force	Impact by collision, loss and lowering of compressive force of threaded part and bearing surface by shock wave

CHARACTERISTICS DIAGRAM OF DEFECTIVE JOINT



AUXILIARY TOOLS

OPTIONAL PARTS FOR AIR POWERED TOOLS

To facilitate effective and convenient use of Tohnichi products, an array of auxiliary parts and special tools have been prepared. (Some torque tools come with auxiliary parts as standard.) Custom-made parts and tools are supplied on request.

Lubricant Grease for Torque Tools EVER TORQUE

Used for torque products maintenance

MODEL	CATALOG NO.
EVER TORQUE	<830>

Example

	APPLICABLE MODEL	APPLICABLE POINT
Semi-Auto AIRTORK	A/AC	Thrust Ring, Steel Ball Scale Piece, Adjusting Screw
Full-Auto AIRTORK	AP, AS	Reduction Gear Clutch
Electric TORQUE WRENCH	DAP	
Multiple Unit	MC, ME, DCME	

U TYPE ONE TOUCH JOINT (FEMALE)

Joints to connect Uni-Screwdrivers to Air Hoses.

CATALOG NO.	APPLICABLE MODEL	SIZE
<130>	U30CN~ U250CN	1/4PF. Female Thread
<131>		1/4PF. Male Thread
<132>		φ8mm Tapered Connection

U TYPE HANDCOVER

Hand slip protection for Uni-Screwdrivers



CATALOG NO.	APPLICABLE MODEL
<150>	U30CN~U120CN
<151>	U250CN

U TYPE TORQUE-FIX TOOL

Tool for Torque Adjustment.



CATALOG NO.	APPLICABLE MODEL
<145>	U30CN~U120CN
<146>	U250CN
<147>	U500CN, UR500CN

U TYPE TOOL KIT

Tool Kit for disassembly and assembly.



CATALOG NO.	APPLICABLE MODEL
<160>	U30CN~U250CN
<161>	U250CN
<162>	U500CN, UR500CN
<163>	U1000CN

AS TYPE TORQUE ADJUST KEY

This key presets required torque.



CATALOG NO.	APPLICABLE MODEL
<140>	AS

AS TYPE SPANNER

Spanner for AS Models to disassemble and assemble.



CATALOG NO.	APPLICABLE MODEL
<170>	AS

OPTIONAL PARTS ON MODEL M

HANDLE VALVE



NAME	CATALOG NO.	EXHAUST OUTLET	OVERALL LENGTH	
Handle Valve	<188>	3/8	135	For Direct Connection
Handle Valve	<189>	1/8	125	Master Valve
Handle Assist	<187>	-	125	

SWITCH HANDLE



NAME	CATALOG NO.	
Start Switch Handle	<331>	Operating Switch
Reset Switch	<332>	Switch for Release
Quick Release Switch	<333>	Operating Switch for Quick Release

MASTER VALVE



APPLICABLE MODEL	CATALOG NO.	EXHAUST PORT × SUPPLY × NUMBER OF PORTS
M-G	<193>	3/8 × 1/8 × 4
	<194>	3/4 × 1/8 × 6
M-F	<195>	1/2 × 1/4 × 4
M-E	<196>	1/2 × 1/4 × 6
M-C	<197>	3/4 × 3/8 × 2
	<198>	1 × 3/8 × 4
	<199>	1 1/2 × 3/8 × 6

SLIDE DRIVE (For ME, DCME)



MODEL
FDME25N
FDME80N
FDME126N

SLIDE DRIVE (For MC)



MODEL
FDMC400N
FDMC1200N

TORQUE SENSOR FOR MULTIPLE UNITS



MODEL	APPLICABLE MODEL
TC-ME	ME
TC-MCA	MC220N, MC400N
TC-MCB-2	MC700N
TC-MCB	MC1200N

TORQUE SCREWDRIVER

RTD TORQUE DRIVER



Rotary slip clutch
Adjustable type
With graduation

Rotary Slip Clutch Mechanism, Reducing Chance of Over-Torque.



RTD120CN with Resin Grip



RTD60CN

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. g	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.				MIN. ~ MAX.	GRAD.
RTD15CN	cN·m 2~15	cN·m 0.1	100	50	1.5RTD	kgf·cm 0.2~1.5	kgf·cm 0.01
RTD30CN	4~30	0.2				3RTD	0.4~3
RTD60CN	10~60	0.5	105	80	6RTD	1~6	0.05
RTD120CN	20~120	1	120	125	12RTD	2~12	0.1
RTD260CN	60~260	2	140	225	26RTD	6~26	0.2
RTD500CN	100~500	2.5	150	330	50RTD	10~50	0.25

Note 1 : Bits are optional. Select required bits from the table on page 31.

Note 2 : Handle bar for RTD500CN (50RTD) is optional.

Note 3 : Locking function is available for RTD15CN to 500CN

Accessories : Preset hook spanner for RTD260CN and RTD500CN
Resin Grip for 120CN, 260CN.

LTD TORQUE DRIVER



Non-rotary slip clutch
Adjustable type
With graduation

Non-Rotary Slip Clutch Mechanism.
When Set Torque Reaches,
Break is Felt by Hand.



LTD120CN with Resin Grip

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. g	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.				MIN. ~ MAX.	GRAD.
LTD15CN	cN·m 2~15	cN·m 0.1	100	50	1.5LTD	kgf·cm 0.2~1.5	kgf·cm 0.01
LTD30CN	4~30	0.2				3LTD	0.4~3
LTD60CN	10~60	0.5	105	80	6LTD	1~6	0.05
LTD120CN	20~120	1	120	125	12LTD	2~12	0.1
LTD260CN	60~260	2	140	215	26LTD	6~26	0.2
LTD500CN	100~500	2.5	150	320	50LTD	10~50	0.25
LTD1000CN	200~1000	5	180	580	100LTD	20~100	0.5
LTD2000CN	300~2000		255	1150	200LTD	30~200	

Note 1 : Bits are optional. Select required bits from the table on page 31.

Note 2 : Handle bar for LTD500CN (50LTD) and LTD1000CN (100LTD) are option.

Note 3 : Locking function is available for LTD15CN to 500CN

Accessories : Preset hook spanner for LTD260CN to 2000CN.

Auxiliary tool for LTD2000CN
Resin Grip for 120CN, 260CN.

RTDZ INSULATED TORQUE DRIVER

Insulated body
Adjustable type
With graduation

Insulated Body for Safety from
Electrical Shock.



RTDZ

Accuracy $\pm 3\%$

MODEL	CAPACITY		OVERALL LENGTH mm	GRIP DIA. ϕ mm	WEIGHT Approx. g	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.					MIN. ~ MAX.	GRAD.
RTDZ260CN	cN·m 60~260	cN·m 2	146	42	260	26RTDZ	kgf·cm 6~26	kgf·cm 0.2
RTDZ500CN	100~500	2.5	183	50	380	50RTDZ	10~50	0.25

Note 1 : Bits are optional. Select required bits from the table on page 31.

Note 2 : Bits are not insulated.

Specification of Resin Grip for Torque driver

Model	RTD120N	LTD120CN	NTD120CN	RNTD120CN	RTD260CN	LTD260CN	NTD260CN	RNTD260CN
Width Across Flat Max (mm)	33				41			
Width Across Corner Max (mm)	35				44			
Length (mm)	67	67	81	68				
Whole Driver length after Grip attached (mm)	130	110	150	110				
Standard Color	Orange	Grey	Green	Black	Orange	Grey	Green	Black
Option Color	Orange/Grey/Black/Green/Red/Blue				Orange/Grey			
Catalog No.	850,851,852,853,854,000				856,857		858,859,860,861	

TORQUE SCREWDRIVER

AMLD/BMLD TORQUE DRIVER

- Non-rotary slip clutch
- Adjustable type
- With graduation

Non-Rotary Slip Clutch Type for Small Size Screws.



AMLD



BMLD

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	ACCESSORIES BITS		WEIGHT Approx. g	CAPACITY		
	MIN. ~ MAX.	GRAD.		⊕ ⊖ thickness x Width	MODEL Metric		MIN. ~ MAX.	GRAD.	
	cN·m	cN·m					gf·cm	gf·cm	
AMLD1CN	0.3~1	0.01	82.5	#0	0.15×1 0.2×1.5 0.3×2	26	100AMLD	30~100	1
AMLD2CN	0.5~2	0.025					200AMLD	50~200	2.5
AMLD4CN	1~4	0.05					400AMLD	100~400	5
AMLD8CN	2~8	0.1					800AMLD	200~800	10
BMLD15CN	2~15	0.1	114	-	-	50	1.5BMLD	0.2~1.5	0.01
BMLD30CN	4~30	0.2					3BMLD	0.4~3	0.02

Note 1 : Bits are sold separately. Select required bits from the table on Page 31.
 Note 2 : When set torque is reached, the break is felt by hand.

AMRD/BMRD TORQUE DRIVER

- Rotary slip clutch
- Adjustable type
- With graduation

Rotary Slip Clutch Type for Small Size Screws.



AMRD



BMRD

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	ACCESSORIES BITS		WEIGHT Approx. g
	MIN. ~ MAX.	GRAD.		⊕ ⊖ thickness x Width	MODEL Metric	
	cN·m	cN·m				
AMRD1CN	0.3~1	0.01	82.5	#0	0.15×1 0.2×1.5 0.3×2	26
AMRD2CN	0.5~2	0.025				
AMRD4CN	1~4	0.05				
AMRD8CN	2~8	0.1				
BMRD15CN	2~15	0.1	114	-	-	50
BMRD30CN	4~30	0.2				

Note 1 : Bits are sold separately. Select required bits from the table on Page 31.

NTD TORQUE DRIVER

NEW



- Non-rotary slip clutch
- Single purpose
- Without graduation

Preset Type with Non-Rotary Slip Clutch.



NTD120CN with Resin Grip

CAUTION : Use a torque meter for setting torque, or request torque setting when purchasing.

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. g	CAPACITY MIN. ~ MAX.	
	MIN. ~ MAX.	GRAD.				
NTD15CN	5~15		95	70	kgf·cm 0.5~1.5	
NTD30CN	10~30				1~3	
NTD60CN	20~60				2~6	
NTD120CN	40~120		105	110	4~12	
NTD260CN	100~260				185	10~26
NTD500CN	200~500				270	20~50
NTD1000CN	400~1000		155	550	40~100	

Note 1 : Bits are sold separately. Select required bits from the table on Page 31.
 Note 2 : Torque adjusting bar is optional. Select bars from the table on Page 26.
 Note 3 : T-bar is standard accessory for NTD500CN and NTD1000CN
 Note 4 : When set torque reaches, the break is felt by hand.
 Accessories : Resin Grip for 120CN, 260CN.

RNTD TORQUE DRIVER

NEW



- Rotary slip clutch
- Single purpose
- Without graduation

Preset Type with Rotary Slip Clutch.



RNTD120CN with Resin Grip

CAUTION : Use a torque meter for setting torque, or request torque setting when purchasing.

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. g	CAPACITY MIN. ~ MAX.	
	MIN. ~ MAX.	GRAD.				
RNTD15CN	5~15		95	70	kgf·cm 0.5~1.5	
RNTD30CN	10~30				1~3	
RNTD60CN	20~60				2~6	
RNTD120CN	40~120		105	110	4~12	
RNTD260CN	100~260				185	10~26
RNTD500CN	200~500				270	20~50

Note 1 : Bits are sold separately. Select required bits from the table on Page 31.
 Note 2 : Torque adjusting bar is optional. Select bars from the table on Page 26.
 Note 3 : T-bar is standard accessory for RNTD500CN
 Accessories : Resin Grip for 120CN, 260CN.

TORQUE SCREWDRIVER

FTD-S/FTD TORQUE DRIVER



Dial
Direct reading

Tightening Torque Values is Given Directly from Dial Plate.
FTD-S with Memory Pointer.
FTD with Preload Device.



FTD-S



FTD

Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	BITS		WEIGHT Approx. g	MODEL Metric	CAPACITY			
	MIN. ~ MAX.	GRAD.		⊕	⊖ Thickness x Width			MIN. ~ MAX.	GRAD.		
FTD2CN-S	0.3 ~ 2	0.05	152	⊕	⊖ Thickness x Width	110	02FTD2-S	gf·cm	gf·cm		
FTD5CN-S	0.5 ~ 5	0.1					05FTD2-S	50~500	10		
FTD10CN-S	1 ~ 10	0.2					1FTD2-S	kgf·cm	kgf·cm		
FTD20CN-S	3 ~ 20	0.5					2FTD2-S	0.1 ~ 1	0.02		
FTD50CN2-S	5 ~ 50	1					5FTD2-S	0.3 ~ 2	0.05		
FTD100CN2-S	10 ~ 100	2					10FTD2-S	0.5 ~ 5	0.1		
FTD200CN2-S	30 ~ 200	5	275	⊕	300	20FTD2-S	1 ~ 10	0.2			
FTD400CN2-S	50 ~ 400	10				40FTD2-S	3 ~ 20	0.5			
FTD8N2-S	1 ~ 8	0.2				330	#3	1.2×8	80FTD2-S	10 ~ 80	2
FTD16N2-S	3 ~ 16	0.5							160FTD2-S	30 ~ 160	5
FTD50CN	10 ~ 50	1	215	#1	0.7×7	5FTD	kgf·cm	kgf·cm			
FTD100CN	20 ~ 100	2				10FTD	1 ~ 5	0.1			
FTD200CN	40 ~ 200	5	270	#2	0.9×7	20FTD	2 ~ 10	0.2			
FTD400CN	80 ~ 400	10				40FTD	4 ~ 20	0.5			

Note 1 : FTD8N2-S, FTD16N2-S, FTD8N and FTD16N have (6.35mm) square drive.

Note 2 : -S models have a memory pointer as standard.

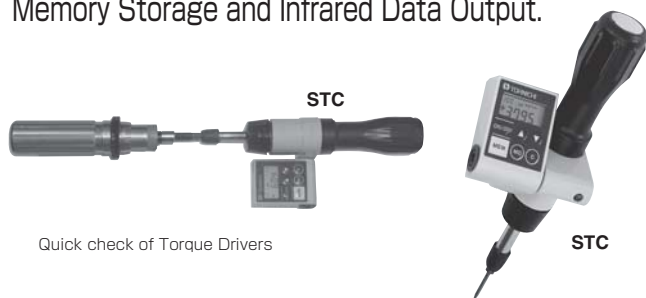
Note 3 : Handle bar is standard accessory for FTD8N2-S and FTD16N2-S.

STC Digital Torque Driver

Digital display
Direct reading
With ratchet gear



Bi-directional Battery Operated Digital Torque Driver. Ideal for Testing and Tightening Screws.
Memory Storage and Infrared Data Output.



Quick check of Torque Drivers

STC

Accuracy ±1%+1digit

MODEL	CAPACITY		OVERALL LENGTH mm	WEIGHT Approx. g	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.				MIN. ~ MAX.	GRAD.
STC50CN	0.1 ~ 50	0.05	201	420	5STC	kgf·cm	kgf·cm
STC200CN	40 ~ 200	0.2			20STC	1 ~ 5	0.005
STC400CN	80 ~ 400	0.5			40STC	4 ~ 20	0.02
						8 ~ 40	0.05

Note : Bits are sold separately. Select required bits from the table on Page 31.

STC OPTIONAL EQUIPMENT

INFRARED RECEIVER.....P.41 PRINTER.....P.41

MODEL	MODEL
R-DT999	EPP16M2

Note : R-DT999, infrared receiver is required for data output.

CONNECTING CABLE

MODEL	DESCRIPTION
379	R-DT999 → EPP16M2
575	CEM2, CEM3, R-DT999 → PC (D-SUB 9Pins Female)
584	R-DT999 → PC (USB A type)

SOFTWARE.....P.41

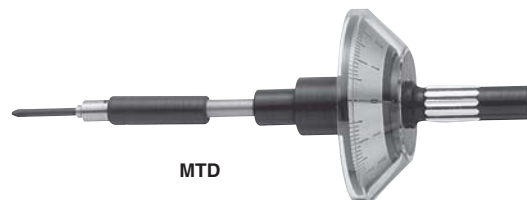
MODEL	DESCRIPTION
DFS	DATA PROCESSING SOFTWARE

MTD TORQUE DRIVER

Dial
Direct reading



Ideal for Inspection and Measuring of Small Screws.
Dial Indicating Type.

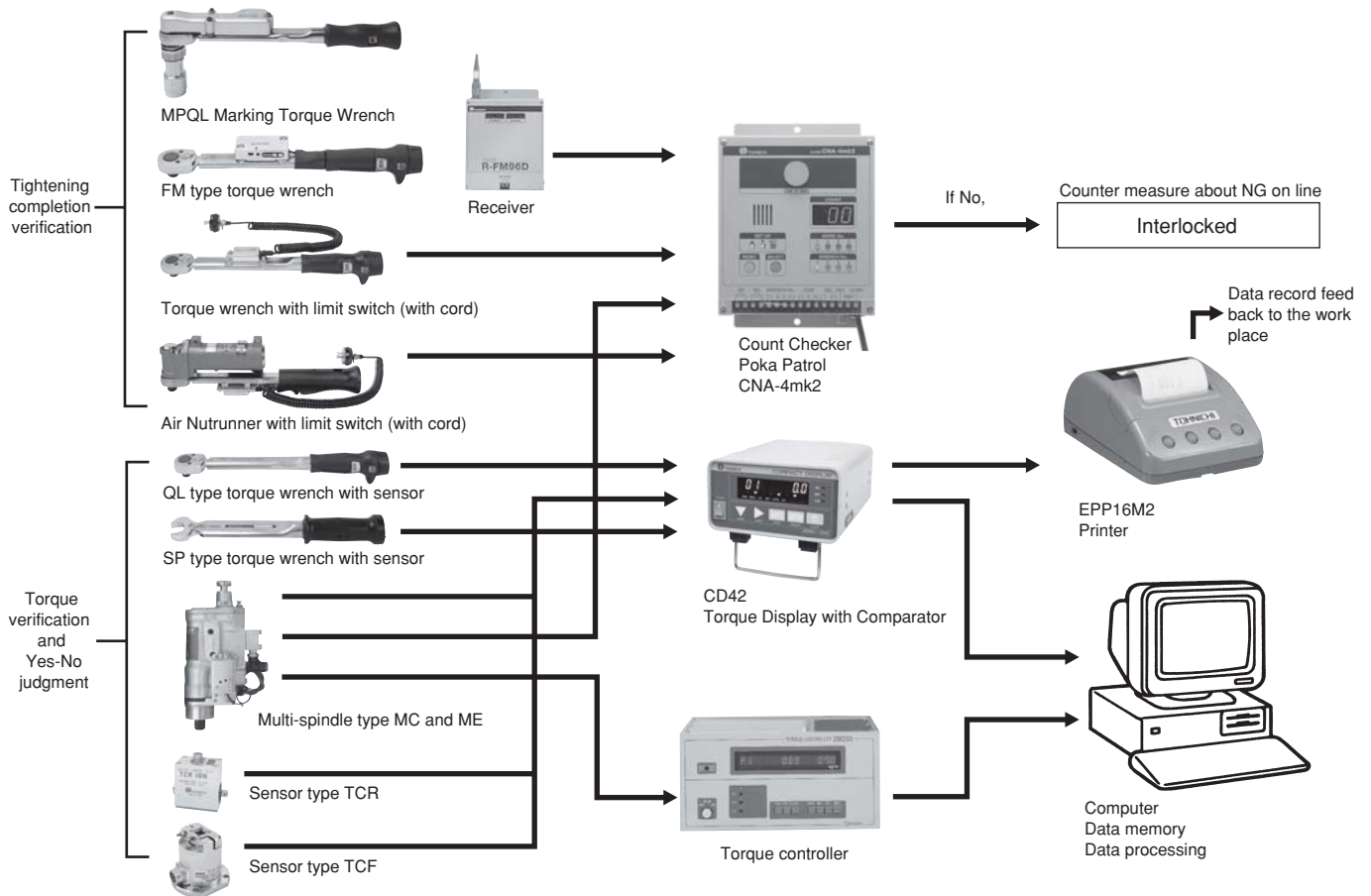


MTD

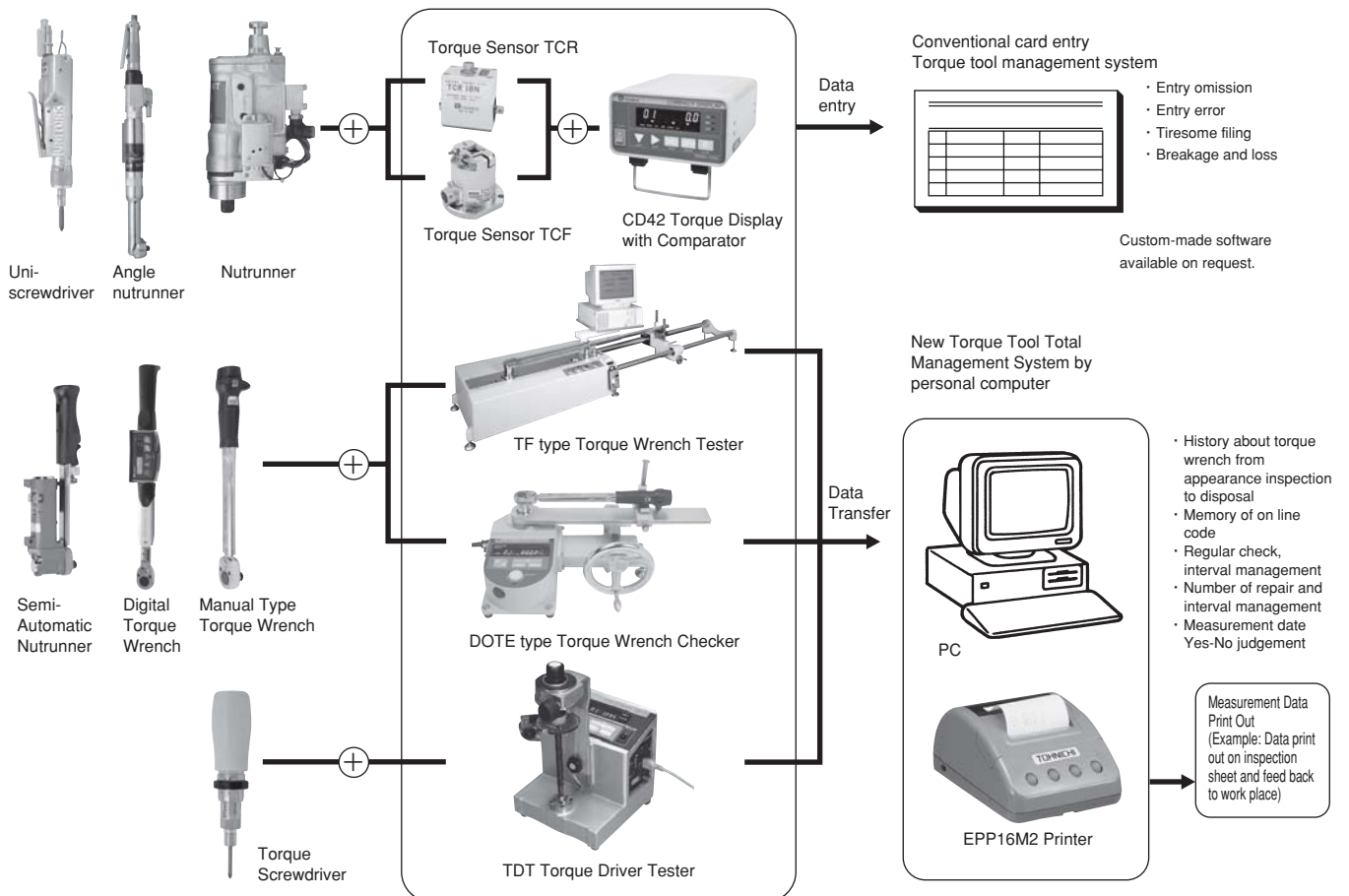
Accuracy ±3%

MODEL	CAPACITY		OVERALL LENGTH mm	ACCESSORIES		WEIGHT Approx. g	MODEL Metric	CAPACITY	
	MIN. ~ MAX.	GRAD.		BITS	⊕			⊖ Thickness x Width	MIN. ~ MAX.
MTD1MN	0.1 ~ 1	0.02	109.5	#0	0.15×1 0.2×1.5 0.3×2	22	10MTD	gf·cm	gf·cm
MTD2MN	0.3 ~ 2	0.05					20MTD	1 ~ 10	0.2
MTD5MN	0.5 ~ 5	0.1	99.5	#0	0.2×1.5 0.3×2	21	50MTD	3 ~ 20	0.5
MTD10MN	1 ~ 10	0.2					100MTD	5 ~ 50	1
			132	#0	0.2×1.5 0.3×2	23	100MTD	10 ~ 100	2

TIGHTENING ASSURANCE SYSTEM



TOOL MANAGEMENT SYSTEM (Labor saving in measurement, inspection and calibration)





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