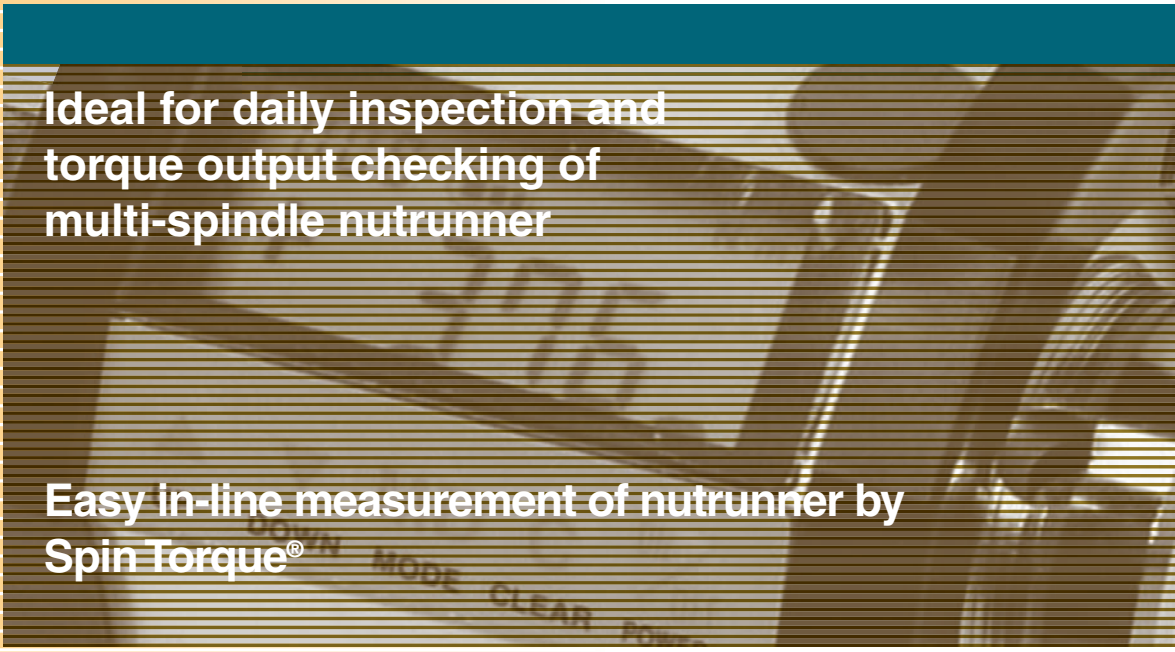
Rotary Peak Torque Meter
Spin Torque®
ST2

PATENTED



ST200N2

ST1000N2

- World's smallest rechargeable rotary torque meter
- Monitor nutrunners during tightening process to prevent product defects
- Reduce manpower spent rechecking output of nutrunners after tightening
- Vastly improved performance with 4 times higher resolution than previous ST version
- 7 models for the capacity from 2 to 1000 N.m

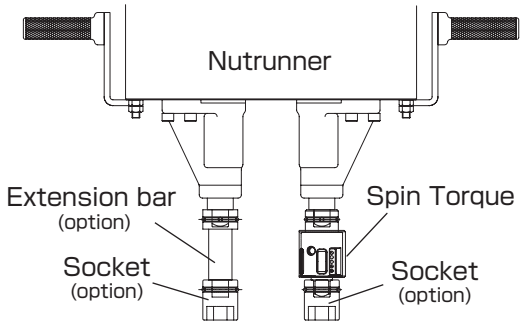
CE

Your Torque Partner TOHNICHI

Applications

- Spin Torque ST2 is the world's smallest rechargeable rotary torque meter. (PATENTED)
- Daily torque check of a nutrunner prevents the outflow of defective products with poor tightening.
- In-line measurement of a nutrunner can be performed.
- Daily torque check can be performed simultaneously with multi-spindle tightening work.
  Optional extension bars (having the same length as ST2) are available. If the extension bars are inserted into the spindles to which the Spin Torque is not attached, torque check can be performed simultaneously with tightening work.

Application example to a multi-spindle tightening machine



- Tightening inspection process can be rationalized.
  With the use of the Spin Torque, torque check can be performed simultaneously with tightening operation. Therefore, retightening and loosening torque measuring operations in the later processes can be rationalized.
  Especially, it can be expected that man-hours are reduced in the inspection operation of thick bolt diameters that requires a large force.
  A multi-spindle machine generally receives the reaction force of tightening inside itself. It is sufficient just to put works on a line. However, when retightening or loosening torque of only one spindle is measured, works are inclined or moved unstably.
  With the ST2 installed to a nutrunner of a multi-spindle machine as shown in the right figure, daily check can be conducted easily.

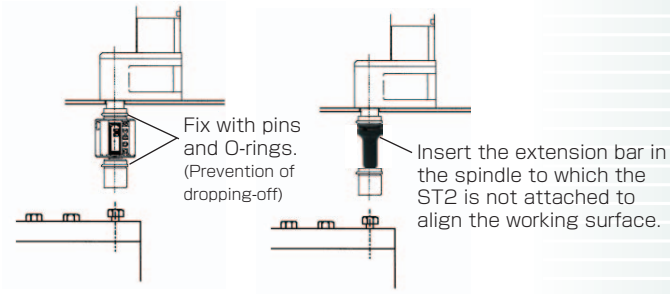
- ST2 provides highly reliable measurement.
  The Spin Torque is incorporated in a position (measuring position) nearest to the screw. Therefore, loss of torque during transmission is reduced and the value closest to the actual tightening torque is displayed.
- ST2 is most suitable for torque check of angle-type power tools.
- Torque of wheel nuts of large vehicles can be checked.
  With the ST2 models, torque of left-handed thread can be measured. Torque of wheel nuts of trucks having left-handed threads can be checked.

Features (Comparison with previous models)

- High accuracy
  Accuracy: ±1%+1 digit. By adoption of the high resolution A/D converter, the measurement resolution was improved by 4 times higher than that of the conventional ST models.
- Bi-directional torque can be measured. ST2 can now be used for measurement of loosening torque.
  By adoption of the high resolution A/D converter, torque measurement of left-handed thread became possible.
- 999 measurement data can be stored. Its memory capacity is about 10 times larger than that of the conventional ST models (100 data).
  Data backup man-hours can be reduced.
- Data backup can be conducted through direct connection with PC.
  On the small body of ST2, a USB (mini B) connector is disposed. It can be connected directly to PC through a cable to back up data. For data management with PC, the optional Excel Receiver is available.
- Up to 10 hours of continuous use is possible. It is 5 times longer than the conventional ST models.
  With a fully charged Ni-MH rechargeable battery, the ST2 can be operated continuously for 10 hours at maximum. Charging time is 2 hours, a quarter of that of the conventional models.
- Global design. CE marking affixed.
  The charger (AC adapter type) for 100-240V±10% is available to be used in overseas plants as well as domestic (Japan) plants. The charger has CE marking and can be used in EC without problem.
- Large model selection
  The ST2 series has 7 models for the capacity from 2 to 1000 N.m. You can select the most suitable model according to your torque capacity or dimensional limit.

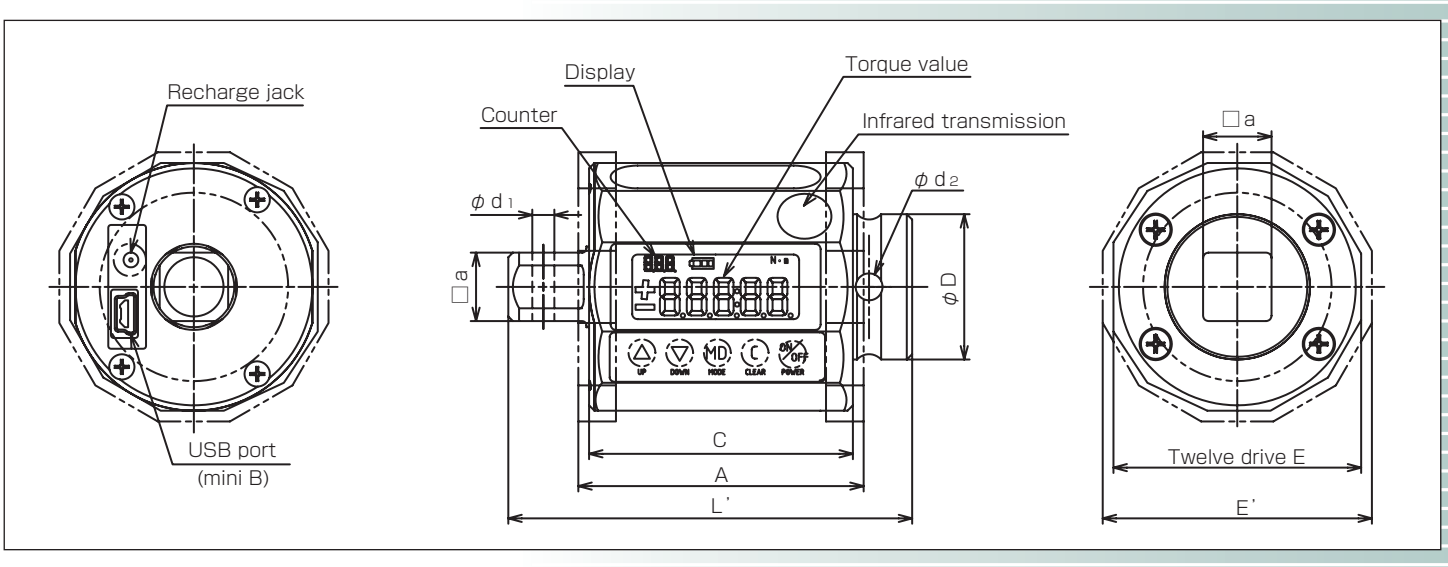
How to Use

■ How to use the ST2 (outline)



1. Mount the ST2 to a nutrunner.
2. Install the socket to the ST2 and fix the joints using pins and O-rings to prevent them from dropping off.
3. Press the power button of the ST2.
4. Check that the counter displays a figure other than "000" to confirm that the peak mode is set.
5. Start tightening with the nutrunner.
6. The peak torque is automatically recorded by the auto memory function. The measured data are automatically counted up, and up to 999 measurements can be continuously conducted.
7. After completing the measurements, transfer the measured data to PC through USB or infrared output (the optional infrared receiver is required.).

Specifications



Model			Torque Range						Dimension [mm]									Weight Approx.
			Min.-Max.			Graduation							Sq. Drive					
Newton	Metric	American	Newton	Metric	American	Newton	Metric	American	L'	E	C	φD	□a	φd1	φd2	A	E'	[kg]
			N.m	kgf.cm	in.lbs	N.m	kgf.cm	in.lbs										
ST10N2	ST100M2	ST90i2	2～ 10	20～ 100	20～ 90	0.01	0.1	0.1				13	6.35	2.1	2.1			
ST20N2	ST200M2	ST180i2	4～ 20	40～ 200	36～180	0.02	0.2	0.2				18	9.53	3.1				
ST50N2	ST500M2	ST450i2	10～ 50	100～ 500	100～450	0.05	0.5	0.5	75	46	49					53	50	0.25
ST100N2	ST1000M2	ST900i2	20～ 100	200～1000	200～900	0.1	1	1				27	12.7	4.1	5			
					lbf.ft													
ST200N2	ST2000M2	ST150F2	40～ 200	400～2000	30～150	0.2	2	0.2										
ST500N2	ST5000M2	ST360F2	100～ 500	1000～5000	72～360	0.5	5	0.5	120			38	19.05	6	6			
				kgf.m						64	69					69	φ73	1.3
ST1000N2	ST10000M2	ST700F2	200～1000	20～ 100	140～700	1	0.1	1	135			51	25.4	6.5	6.5			

⚠ CAUTION: The Spin Torque ST2 cannot be used with impact wrenches.
(It may cause damage or degradation to the electronic components.)

Common Specifications

Accuracy	±1%+1digit
Direction	Right and left
Display	7 segment LCD: Unit, Battery life, Direction Counter value: 3 digits (character height: 3mm), Torque value: 4 digits (character height: 7mm)
Measurement mode	PEAK (holding of maximum value)/RUN (continuous measurement)
Data memory	999
Arithmetric function	Number of samples, maximum, minimum and average values
Data output	Infrared output, USB output (Communication mode can be switched by key operation.)
Power	Ni-MH (Nickel hydrogen) battery pack
Continuous operating hours/ charging time	Approx. 10 hours/approx. 2 hours
Charger	Input: AC100V to 240V±10% (in accordance with PSE, CE-compliant)
Other functions	Auto Power OFF: 3 minutes, Auto Zero, Battery indicator in 4 steps, Auto Memory Reset: 0.5 to 5 seconds variable
Operating temperature range	0 to 40°C

Standard Accessories

1) Battery pack BP-6 (installed in main unit)
2) Charger BC-4
3) CD-ROM (USB driver)
4) USB connecting cable (USB mini B - USB A)
5) Power plug for long-term storage
6) Power conversion plug
7) Carrying case
8) Operating instruction

* Each 1 piece

Optional Accessories

Extension Bar for ST2

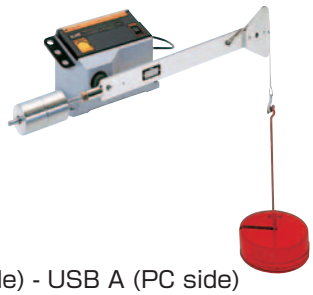
Same length as ST2 can be performed easy multi-spindle check.

Catalog No.	Applicable Model
(283)	ST10N2
(281)	ST20N2
	ST50N2
(247)	ST100N2
	ST200N2
(248)	ST500N2
(249)	ST1000N2

Infrared Receiver R-DT999

Calibration Instrument TCL

Model	Component	Applicable Model
TCL50N	LEVER, WIRE, HOLDER(1kg), Scale Pan(100g)	TCF10N～40N、TCR18N、LC20N、ST10N2～50N2
TCL200N	LEVER, WIRE, HOLDER(1kg)	TCF100N～200N、TCR180N、LC200N、ST100N2～200N2
TCL800N	LEVER, WIRE, HOLDER(1kg)	TCF400N、TCR700N、ST500N2
TCL2000N	LEVER, WIRE, HOLDER(1kg)	TCF1000N、2000N、TCR1800N、ST1000N2

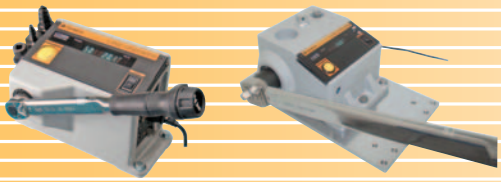


Connecting Cable : No. (384) USB mini B (ST2 side) - USB A (PC side)

* Approx. 1.8 m, with noise filter

For Daily Inspection of Torque Wrenches Line Checker Model: LC2

LC20N, LC200N LC1000N



Digital Torque Wrench Checker

Direction

Data processing capabilities through RS232C output

50 data memory storage

Model LC20N can be also performed torque driver's check.

■ Specifications

Accuracy±1%+1digit

MODEL	CAPACITY		INLET SQUARE DRIVE	Dimension mm			WEIGHT Approx.	MODEL	CAPACITY	
	MIN. ~ MAX.	1digit		OVERALL LENGTH	OVERALL WIDTH	OVERALL HEIGHT			MIN. ~ MAX.	1digit
	N·m	N·m	mm				kg		kgf·cm	kgf·cm
LC20N2	0.5～ 20	0.005	9.5	278	160	167	10.5	200LC2	5 ～ 200	0.05
	N·m	N·m							kgf·cm	kgf·cm
LC200N2	5 ～ 200	0.05	12.7					2000LC2	50 ～2000	0.5
	N·m	N·m							kgf·m	kgf·m
LC1000N2	50 ～1000	0.2	25.4	500	290	186	34	10000LC2	5 ～ 100	0.02

For Calibration of Torque Wrenches/Drivers Torque Calibrator & Controller Model: TCC

TCC500N

Torque Calibrator & Controller

Direction

Wider torque range with high accuracy

Tool management software pre-installed

TCC100N-D can be conducted calibration for torque drivers.

■ Specifications

Accuracy ±1%+1digit

MODEL	CH	TORQUE CAPACITY		MAX EFFECTIVE LENGTH	SQUARE DRIVE	TOTAL LENGTH	WIDTH	HEIGHT	WEIGHT
		MIN-MAX	1DIGIT	mm		mm	mm	mm	kg
TCC100N	1	4～ 100 N·m	0.02	440	12.7	670	370	330	26
	2	1～ 25 N·m	0.005		9.53				
TCC100N-D	1	4～ 100 N·m	0.02	440	12.7				
	2	20～ 500cN·m	0.1cN·m		6.53				
TCC500N	1	20～ 500 N·m	0.1	1030	19.05	1165	560	395	53
	2	4～ 100 N·m	0.02		12.7				
TCC1000N	1	50～1000 N·m	0.2	1700	25.4	1885	780	510	135
	2	20～ 500 N·m	0.1		19.05				

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