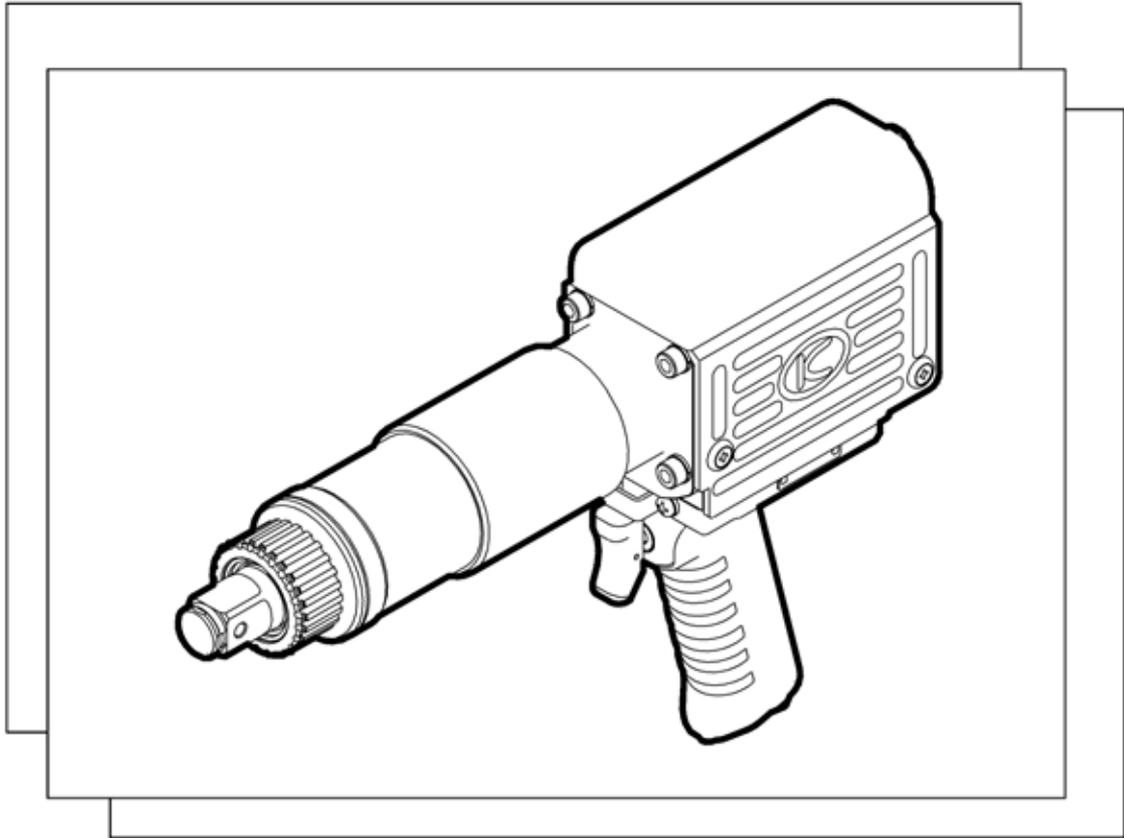


PTS-450EX

Operation Manual



Read this Operation Manual thoroughly and the separate "Instruction Manual" before using.

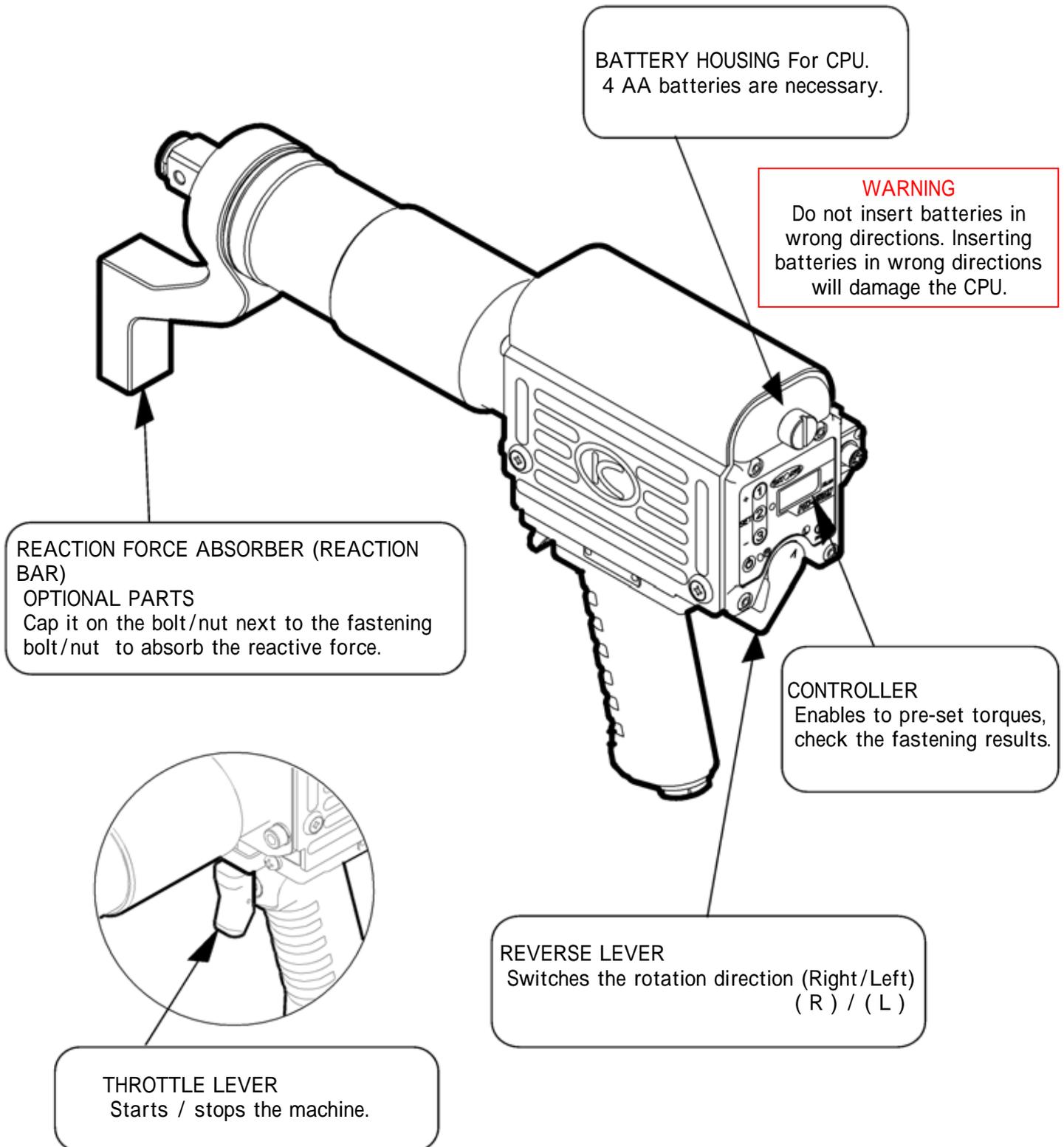


KUKEN CO., LTD

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Main Unit : Part Name And Functions



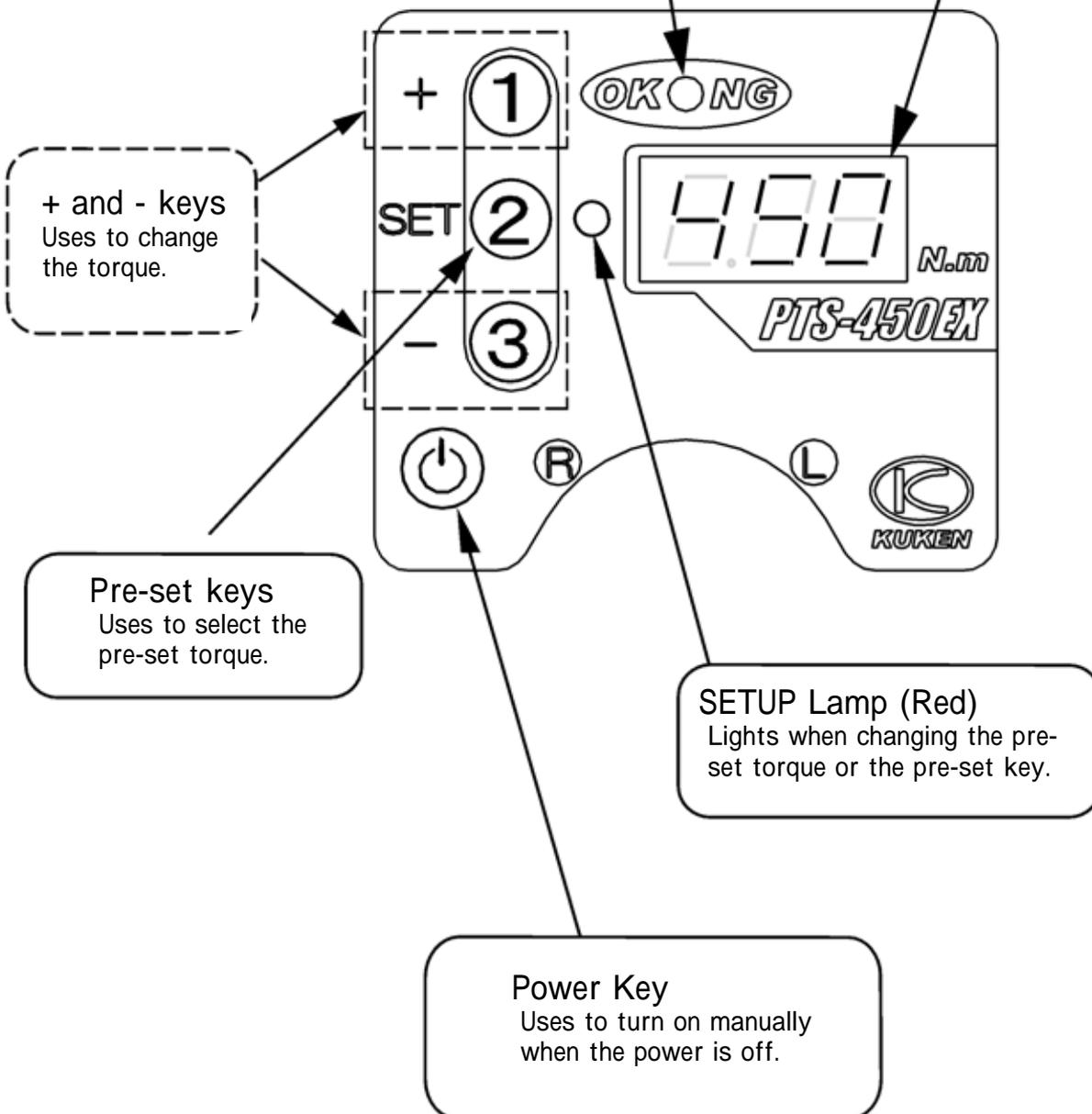
Controller Unit : Part Name And Functions

JUDGMENT LAMP

OK (GREEN) : Lights when the fastening is completed successfully.

NG (RED) : Lights when the set torque cannot be obtained due to interruption or error.

Display Panel
Displays the torque



Unique Functions

Additional Functions

PRE-SET FUNCTIONS

3 different torques can be set and stored (Pre-set torques).

In case of pre-tightening and final-tightening works, the tool can be used for various works.

8

AUTO - START and AUTO - POWER OFF

By pressing the throttle lever, the CPU starts automatically.

If not operating for a certain period of time, the power will be turned off automatically.

REAL TIME DISPLAY

The torque can be shown on the panel in real time and easy to understand the situation.

9

LOOSENING FUNCTION

AUTOMOTIVE MODE and INDUSTRIAL MODE can be selected for loosening operations.

6

10

11

JUDGMENT LAMP

The fastening result can be judged if the operation is successful or not.

If the operation is successfully completed, the judgment lamp turns green.

If the operation is suspended or stopped, the NG lamp turns and alert its under-torque.

9

AUTO SHUT OFF

The solenoid valve shuts off and stops the machine when the operation is completed successfully and the judgment lamp turns green.

9

Safety Functions

Fail Safe Function

In case batteries are exhausted or very low, the CPU will not be operated and the spindle turns very slowly to reverse direction.

Operators can easily recognize the trouble.

Error Detection Function, Abnormal Fastening Detection [CH1]

This function detects bolt stretching beforehand and forces to stop the machine.

This function can be turned on/off depending on works.

12

13

14

Function to Prevent Operational Error

This function is to prevent an operational error. If the key which is set [- - -] selected by mistake, it will never be activated.

8

Other Functions

Power Source

CPU is operated by batteries and batteries.

Please use 4 of AA dry cell batteries. Alkaline (recommended) and also Ni-MH is available.

15

Data Transmission (Option)

PTS can be connected to a computer or the printer (option) with the original transmission cable (option) to transfer results.

PTS must be the transmission model (option) in order to transfer data.

6

7

16

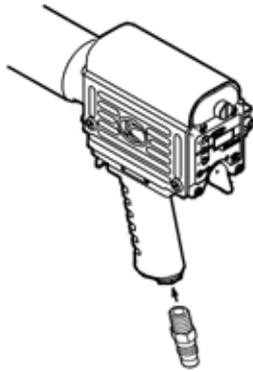
17

Preparation (1) Attaching Accessories

Check to make sure that all the components are present and that nothing is damaged in shipping.
If any problems, please contact your dealer.

- Coupling Plug 20PM ······ 1
- Spiral Retainer Ring ······ 1
- AA Dry Cell Alkaline Battery ······ 4

Attach the coupling plug.

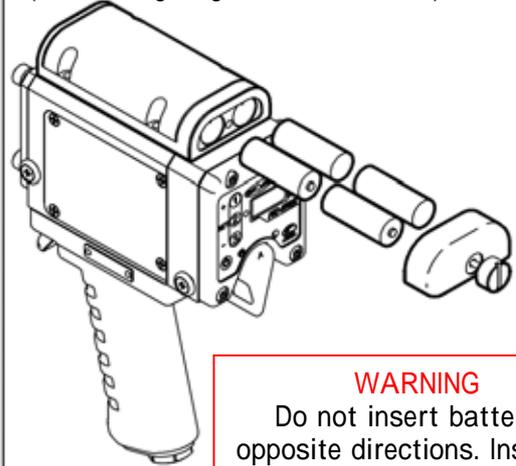


Insert batteries into PTS.

Unscrew and open the battery housing cover and insert batteries.

Be sure to insert correct directions of batteries.

(If not using long, remove batteries)

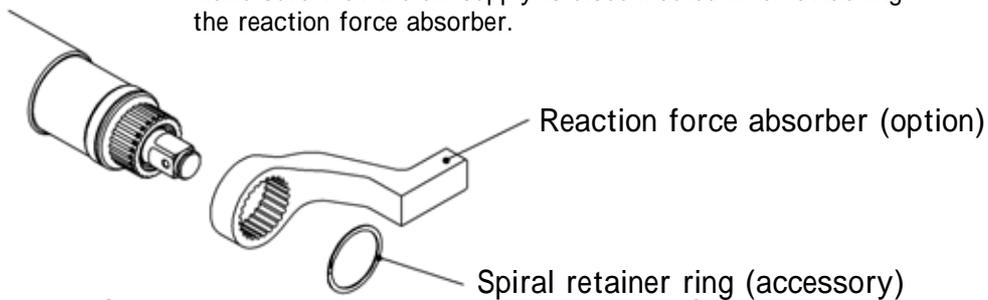


WARNING

Do not insert batteries opposite directions. Inserting batteries opposite directions will damage the CPU.

Attach the reaction force absorber (option).

Make sure that the air supply is disconnected when attaching the reaction force absorber.



Attach the reaction force absorber and then attach the spiral retainer ring.

Make sure that the spiral retainer ring is properly attached to avoid the reaction force absorber to be come off.

Warning

Operating PTS-450EX without a reaction force absorber may cause injuries.
Please do not operate PTS-450EX without a reaction force absorber.

Preparation (2)- Initial Setting (Description)

Before using PTS, following must be selected.

(1) Selection of Transmission Mode (Transmission Model is optional).

There are 2 types of PTS models. Transmission model and non-transmission model.

If non-transmission model, select either mode below.

PRINTER MODE [Prn] ······ Connect the printer (option) to out put the result on thermal paper.

PC MODE [PC] ······ Connect a computer to transfer results

(2) Selection of [Automotive] Mode

[Automotive] and [Industrial] can be selected purposely.

application	Automotive Mode	Industrial Mode
Panel Display	Aut	Ind
Direction	Right / Left handed screws	Right handed screws only
Maximum Torque	Up to the pre-set torque	Up to the pre-set torque
Maximum Torque for loosening	Up to the pre-set torque selected currently	Up to 500 Nm
How to set loosening	Press of the display panel [- L -] will be shown. To continue loosening works, please press again. (This loosening function only works 1 bolt/nut)	Turn the reverse lever to LEFT. The Loosening Mode is automatically set. (To turn the reverse lever, fastening mode again)

(3) On / Off of the abnormal fastening detection [CH1] **

Select [CH1] on or off.

Purposely add this function for fastening wheel nuts.

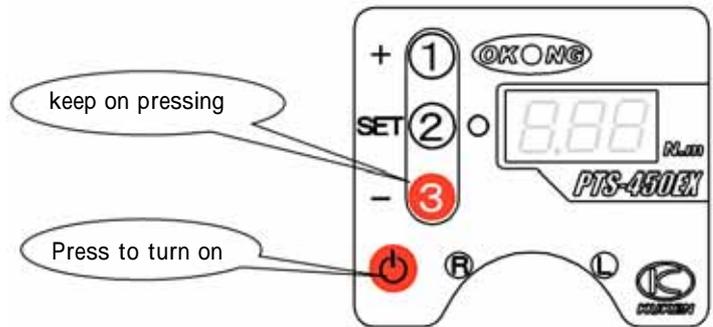
It may detect [CH1] even after fastening general bolts or nuts if the automotive mode is selected.

** Please see page 14 for further information of [CH1].

Preparation (2)- Initial Setting (Operation)

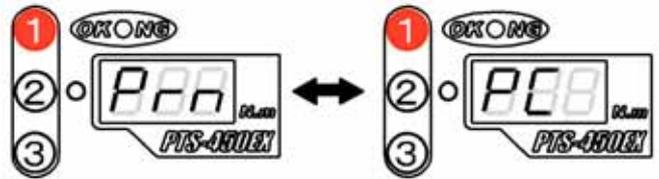
To select each mode described in the previous page,
Please follow the instruction below.

Make sure the machine is turned off.
Press  for a few second and press the power switch while pressing .



To select Transmission Mode

Press  key once to change the mode from the [Prn].
And press  again to change the mode back to [PC]



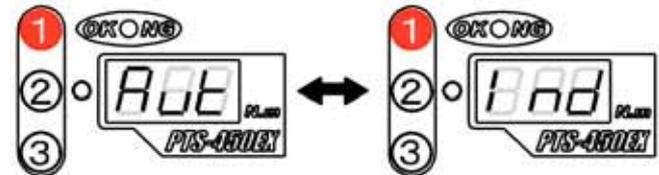
If the PTS is not the transmission model, either can be selected.

Press  to complete the selection.
Then the selection will move to the next setting.



To select Loosening Mode

Press  key once to change the mode from the [Aut].
And press  again to change the mode back to [Ind].

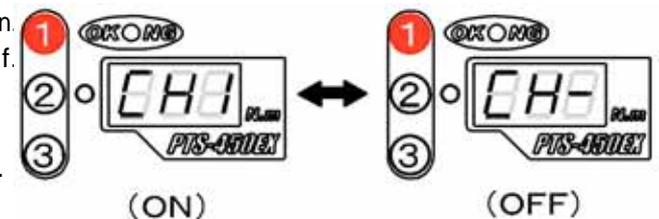


Press  to complete the selection.
Then the selection will move to the next setting.

To select [CH1] Mode

Press  key once to change the mode from the [CH1] on.
And press  again to change the mode back to [CH-] off.

Press  to complete the selection.
After the selection of [CH1], the power will be turned off.



Preparation (3) How to pre-set the torque

This section describes how to pre-set the torque for keys , , and .

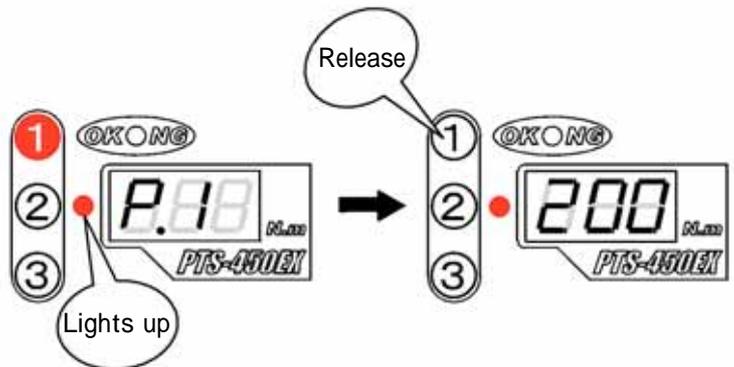
For example, to pre-set with 250 Nm.

Turn on the power switch and make sure the display blinks.
Press key for 3 seconds.



SETUP Lamp lights up and the display indicates the pre-set key and then the previous torque.
(This figure shows 200 Nm as the previous torque).

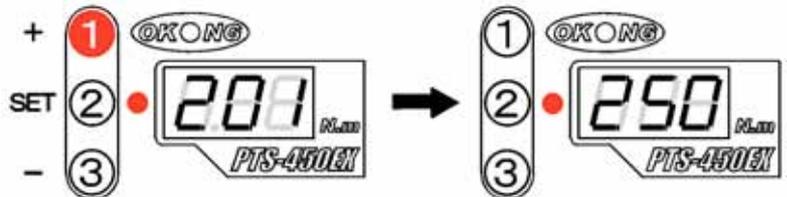
As soon as the torque is displayed, release the finger from the key.



Press [+] or [-] key to change the value to 250.

Pressing [+] for a few seconds increases the value quickly.

Pressing [-] for a few seconds decreases the value quickly.



To complete the setting, press [SET] key.

Please make sure the display blinks [0] after setting.



To pre-set other keys, repeat above method though .
Once pre-set the torque, the value is stored until re-set the torque.

(Caution) The torque range is 140 to 450 Nm. The torque can not be set beyond the range.

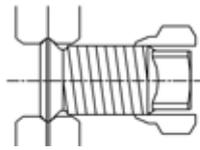
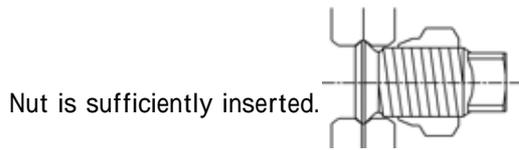
How to fasten

CAUTION!!

In case of the wheel nut made up of the inner nut and the outer nut, please make sure the following.

Make sure to fasten the inner nut securely before fastening the outer nut.

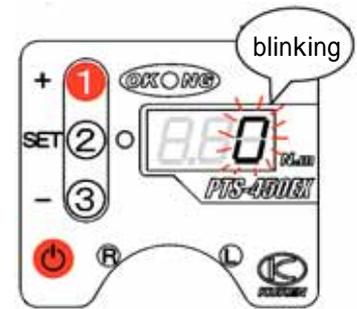
Since this machine absorbs the reactive force by the (inner or outer) nut, fasten all nuts with inserted sufficiently to protect the thread.



Selecting the pre-set number (for example, the pre-set number and 250Nm)

Press the power switch. The display shows [0] blinking.

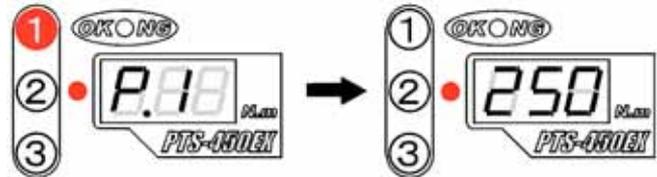
Press for a few second. The pre-set is set 250 Nm.



When the display indicates [P.1], release the key.

Soon after indicating [P.1], the display also indicate the torque value [250] Nm.

At this moment, the pre-set key is selected.

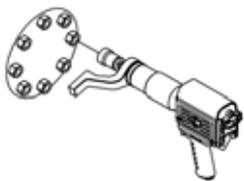


Selected pre-set number is valid until changing to other pre-set number.

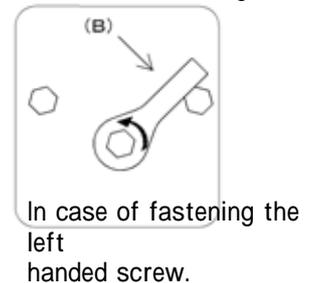
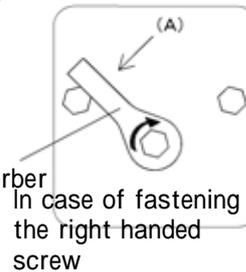
After applying the reaction force absorber next to the fastening bolt/nut, insert the socket to the fastening bolt/nut and press the throttle lever.

(Caution)

- In case of right handed screw, direction (A)
- In case of left handed screw, direction (B)



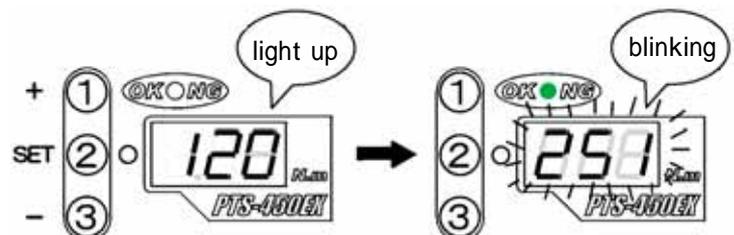
Reaction Force Absorber



While operating, the torque will be shown in real time.

Once reaches the pre-set torque, OK lamp will be lit (green) and stops automatically.

If releasing the throttle lever while operating, NG lamp (red) will be lit to alert the operator.



How to loosen (1) Automotive Mode [Aut]

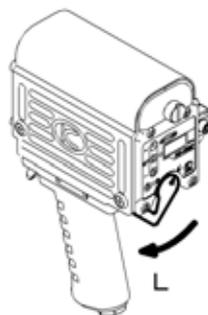
In case of [Aut] mode, the maximum loosening torque is the pre-set torque.

CAUTION!!

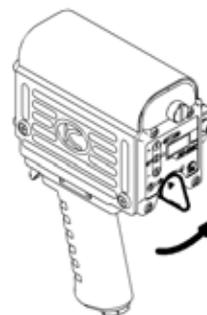
In case of the wheel nut made up of the inner nut and the outer nut, please be careful that the inner nut may be loosen while loosening the outer nut.
Please make sure to fasten inner nut securely before fastening the outer nut.

Turn the reverse lever to each direction.

- In case of right handed screw, turn the reverse lever to the left.
- In case of left handed screw, turn the reverse lever to the right



Left direction

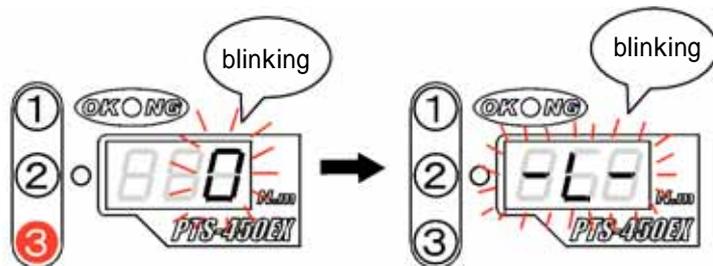


Right direction

(loosening the right handed screw) (loosening the left handed screw)

When the power is turned on, the display shows [0] blinking. Then press to loosen operation. When the display shows the [- L -] blinking, the loosening operation is ready.

To cancel the loosening operation, press .



- [- L -] will be shown only for 10 seconds. After the 10 seconds, the power will be turned off.

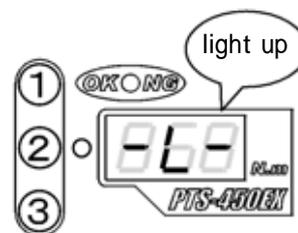
Apply the reaction force absorber next to the fastening nut and press the throttle lever to start operating.

While loosening, the display shows [- L -] lighting.

Soon after the loosening is completed, turn the reverse lever back to fastening position.

To continue loosening operation, repeat this method for each nut.

Once complete the loosening operation, the mode will be back to fastening mode.



[E L E] will be shown on the display if exceeds the maximum torque (no more than pre-set torque) and the machine will be turned off automatically. In this case, please use an impact wrench to loosen the nut.

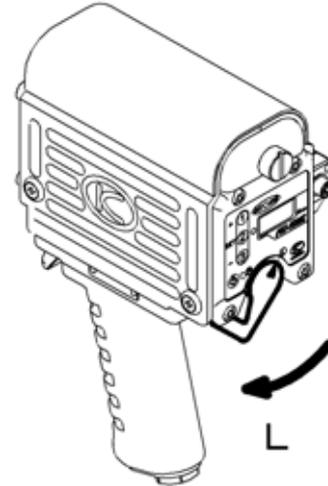


How to loosen (2) Industrial Mode [Ind]

The maximum loosening torque for [Ind] mode is 500 Nm.

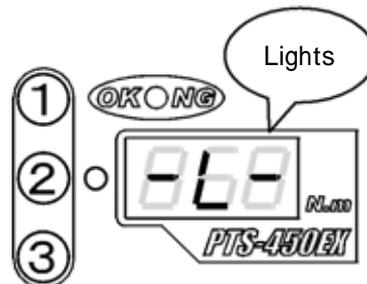
Turn the Reverse Lever to the left.

Reverse direction
(to loosen the right handed screw)



Apply the reaction force absorber next to the fastening bolt/nut.
And press the throttle lever.

While loosening, [- L -] will be displayed.



If exceeding the maximum torque 500 Nm, [≡L≡] will be displayed and the torque limiter will shut off the machine.

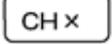
In this case, please use an impact wrench to loosen the bolt/nut.



Warning

- While operating PTS, do not touch the reaction force absorber or the socket.
- If something wrong with PTS, please release the throttle button and stop the operation.

Trouble Shooting (1)

	Symptom/Panel Display	Causes	Measures
Main Unit	Torque displayed on the panel does not reach the pre-set torque. (*1)	Air pressure is decreased when operating.	Eliminate the cause and check the air compressor or others. Check the pre-set torque and re-set the value again.
		The torque can be set incorrectly.	
	Reaches to the pre-set torque and stops automatically before the nut/bolt is bottomed out.	Abnormality on the thread surface (due to seizure of thread or others)	Replace the nut/bolt with new one.
Battery	Even though the throttle lever is pressed, the spindle slowly rotates in the reverse direction against the rotative direction (Reverse Lever).	Batteries are not inserted.	Insert batteries.
		Batteries are not properly placed in the battery housing.	Securely set batteries in place.
	 is displayed. (*2)	Batteries are running low.	Replace batteries with new ones.
Controller	 is displayed and turned off immediately. (XX is indicated 2 digit number) (*2)	Failure of the controller (CPU).	Please refer the next page.
Others	 is displayed and turned off immediately. (X is indicated 1 digit number) (*2)	Troubles other than the main unit.	Please refer the next page.
	 is displayed and turned off immediately.	Exceeded the torque limit for loosening.	Please refer the next page.

(*1)  may be displayed in this case.
If something wrong with the machine, please release the throttle lever and stop operating the PTS.

(*2) Please refer the next page "troubleshooting (2) and (3)" for error codes.

Caution

If the operation is taking longer than usual and the machine do not auto-stop, release the throttle button and stop the operation.

If any troubles other than above or if measures do not solve troubles, please contact the dealer for repair.

Trouble Shooting (2) Description of error code

Error Code Description on PTS main unit (troubles on the main unit)

Error Code	Panel Display	Causes	Measures
E01		Malfunction of the torque sensor causes the misalignment of "zero point".	Please contact your dealer.
E02		The sensor detects the abnormal uprising of the torque higher than the pre-set torque.	Please check the surface of screws and grease and fasten again. However [E02] is still shown on the panel, please contact your dealer.
Lo		Low batteries	Please replace with new batteries.

Error Code Description on fastening

Error Code	Panel Display	Causes	Measures
CH1 (CHECK1)	<p>If [CH1] is turned on,</p>	Please see the next page [Troubleshooting (3)].	
Under Torque	<p>Result below pre-set torque</p>	Releasing the throttle lever before reaching the pre-set torque. (The figure shows 120Nm when releasing the throttle lever).	Please loosen the nut once and try to fasten again.

Error Code Description on loosening

Error Code	Panel Display	Causes	Measures
≡ L ≡		[when loosening mode is selected] The loosening torque exceeds the maximum torque.	Please loosen bolts/nuts by impact wrenches.

Trouble Shooting (3) How to deal with [CH1] Abnormal fastening

Depending on the condition of wheels, bolts, nuts and other fastening parts, fastening with PTS may damage bolts. (Hereinafter this condition will be referred to as "abnormal fastening").

This machine has the function to immediately detect this "abnormal fastening" and shut down to prevent bolts and other parts from damages.

When "abnormal fastening" is detected, "CH1"(CHECK1) is displayed on the controller and the machine stops.

When "CH1" (abnormal fastening) is displayed, check the following.

[1] If "CH1"(abnormal fastening) is displayed, please remove the nut.

(Caution) If the wheel nut is made up of the inner nut and the outer nut, please make sure to fasten the inner nut with recommended torque after loosening the outer nut.



Warning

If "CH1" is displayed, do not continue fastening. Loosen the bolt / nut first. Otherwise the bolt may be stretched or the wheel may be deformed.

[2] Please check the following;

- 1) Whether the wheel center is misaligned to the wheel bolt.
- 2) Whether there are any damages on the seating surface of wheels and nuts and thread face.
 - Replace the parts when there are damages or unevenness of the seating surface.
- 3) Whether the wheel bolt is stretched.
 - If so, replace with the new bolt.
Try to fasten the nut by hand. If the nut can not be fastened smoothly to the end, the bolt must be replaced.
- 4) Whether the torque is appropriate.
 - Please refer the specified value of respective automobile manufacturer.
- 5) Whether the amount of grease applied on the surface is appropriate.
 - **In particular, excessive grease application on the aluminum wheel is a cause of excessive axial force generation.** Please pay full attention to the amount and portion of application so that "the specified grease applied in a thin layer on the portion specified by the automotive manufacturer".**

** Axial Force : Force to pull the bolt (Fastening force)

[3] After examine bolts, nuts and others for abnormality or changing to new parts, please fasten nuts with extra pre-tightening.

(Caution) If the wheel nut is made up of the inner nut and the outer nut, please make sure to fasten the inner nut with recommended torque after loosening the outer nut.

Cautions for operation

In any case, do not touch the reaction force absorber and the socket when operating.

If anything wrong with the machine, immediately release hands from throttle button to stop operation.

Always keep the working air pressure within the range of 0.6 to 0.7 MPa (Pe). Usage under the air pressure of over 0.7 Mpa may cause the defect of the built-in solenoid valve.

Avoid excessive grease application on the air motor. It may cause the defect of the built-in solenoid valve.
(As a guideline, apply "one or two drops of the machine oil ISOVG 10 once a day.")

When applying the cap of the reactive force absorber to the nut, do not align the absorber by hand.
The hand might be pinched between the reactive force absorber and an object by accident when starting the machine.

Do not operate in the condition that the socket of the reactive force absorber and the socket of the main unit are not properly inserted into the respective nuts. The socket or reactive force absorber may come off the nut, resulting in human injuries and damage on the nut and the object.

Do not pour "liquid" or "oil" onto the controller.

Do not make a high impact on the controller.

In case the machine does not stop when the OK lamp is on, it might be at fault. Stop using the machine immediately.

Replace batteries when the power is off.

In case of tightening, fastening may be completed with a little larger torque than the pre-set torque.
(When exceeding the specified upper limit of torque by tightening, once loosen the nut and re-fasten it from the beginning.)



Warning

**Do not insert batteries opposite directions.
Inserting batteries opposite directions will damage the CPU.**

Use AA dry cell batteries X 4. Alkaline (recommended), Ni-MH(rechargeable), Oxyride dry batteries are applicable.
Do not use other batteries than specified. Do not use worn batteries.

Carefully read cautions on batteries and follow the direction.

Following cases may cause human injury, liquid leaking of batteries, excessive heat of batteries, or burst of batteries

Do not peel the exterior package of the battery or scratch the battery.

Using those batteries may cause the heat or burst.

Do not insert batteries opposite direction. (+) (-)

Do not mix batteries with other assorts or different voltage.

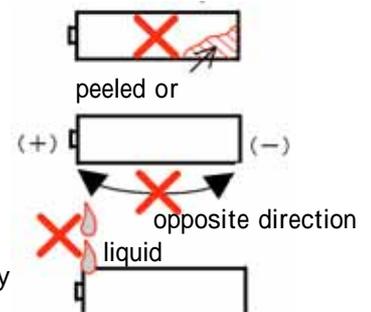
Replace all batteries with new. Do not mix with charged and discharged batteries.

Do not pour liquid on batteries nor do not soak batteries into liquid.

If something wrong with batteries, please do not use.

If not using the machine for a long time, please remove and store batteries properly

In case of leaked liquid from batteries attached to skin or garment, wash off with clean water immediately.



Warning

If properly used under the normal use environment and nothing wrong with bolts, nuts or object which are to be fasten, a torque wrench is not necessary to check the fastening result.

Please check and confirm the torque with a torque wrench or other measurement tools at the beginning of the operation.

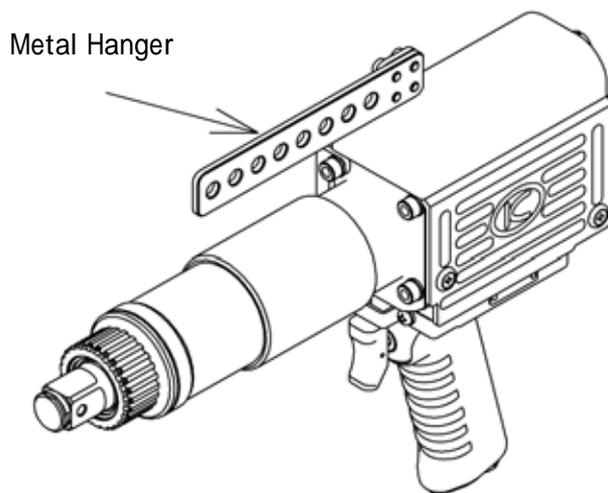
Options

Reactive Force Absorber

Any kind of reactive force absorber is available to design and make.
Please ask your dealer.

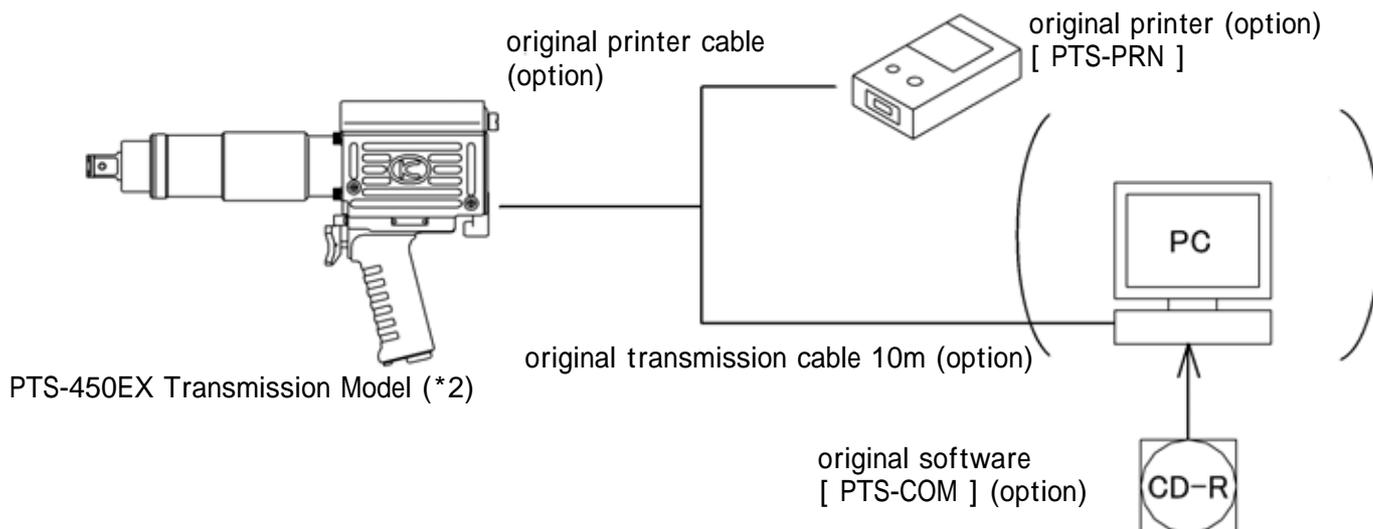
Metal Hanger

This is also the optional part which is very convenient to keep the machine hanging.



Transmission

PTS-450EX can be connected to the printer or the computer(*1). And the result can be saved as data.



(*1) PTS can not be connected both the printer and the computer at same time.

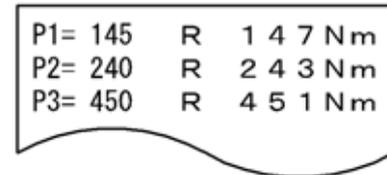
(*2) PTS-450EX must be the transmission model in order to connect the printer or the computer.

Printer Output (PTS-PRN)

By connecting the optional printer, it enables to print the pre-set key number and the pre-set torque, the direction, the result, and a company name/facility name. (The company name/facility name must be registered at KUKEN and must be within 24 letters.)

But the date or the operation time will not be printed.

If using the printer, please refer Page 7 and select [Prn].



PC Output (PTS-COM)

By the installation of the optional software (PTS-COM) to a computer,

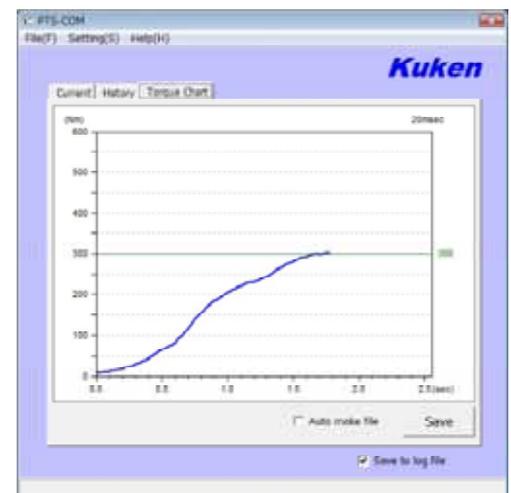
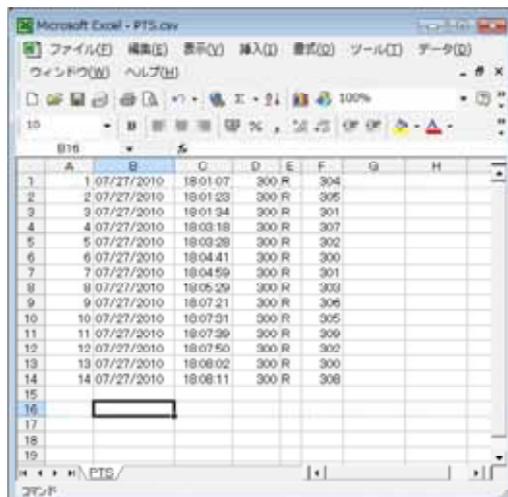
Displays the torque, the number of screws, and the date on the computer screen.

Also it enables to save in the computer file as data.

Fastening history can be read in Excel format.

The torque chart (time - torque) can be displayed and saved in the computer.

If using a computer, please refer Page 7 and select [PC].



Main Unit Specifications (controller included)

Total Length	354 mm (14.0 in.)
Weight	5.3 kg (11.7 lbs.) ** Reactive force absorber, socket, and batteries not included.
Free Rotation Speed	100 rpm
Air Consumption	0.38 m ³ /min (13.5 c.f.m.)
Drive Size	3/4" Sq.

Controller Specifications

Use Environment	Ambient temperature : 0 - 50	Humidity : 20 - 95 % (non condensing)
Fastening Method	Torque method	
Parameters to be set	Set torque, fastening mode (right hand screw/left hand screw)	
Resolution	1 Nm	
Set Torque Range	140 - 450 Nm 1Nm/step	
Loosening Mode	No torque display and automatic stop (but torque limiter is still valid)	
Display		
Numeric representation	0 - 999 3 digit LED with 7 segments	Displayed by x 1Nm
Judgment Lamp	OK (green) : Lights when reaching to the set torque NG (red) : Lights when fastening is interrupted. Warns insufficient torque.	
Controller		
Pre Set Key	Uses to select the pre-set torque. Uses as +, SET, and/or - when changing the torque.	
+ and - key	When the + key is pressed, 1Nm is added to the set torque. When - key is pressed, 1Nm is subtracted from the set torque. By keep on pressing the key, the numeric value can be fast-forwarded.	
Power Key	Uses to manually startup for the set torque setting, etc.	
Battery	AA dry cell x 4 alkaline (recommended), Oxyride, Ni-MH dry cell are applicable	
Automatic Power Off	Power is automatically turned off about 10 seconds after fastening or loosening is operation is finished, or key operations are completed.	



3-6-15 NONOUE, HABIKINO-SHI
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U.K.	:EC DECLARATION OF CONFORMITY	- Individual machinery and safety components
France	:DÉCLARATION DE COMFORMITÉ CE	- Machine seule et composants de sécurité
Deutschland	:EG KONFORMITÄTSERKLÄRUNG	- Gesamtmaschine und Sicherheitseinrichtungen
España	:DECLARACIÓN DE CONFORMIDAD CE	- Maquinaria individual y componentes de seguridad
Italia	:DICHIARAZIONE DI CONFORMITÀ CE	- Macchina singola e componenti di sicurezza
Portugal	:DECLARAÇÃO DE CONFORMIDADE CE	- Maquinaria individual e dispositivos de segurança
Nederland	:EG KONFORMITEITSVERKLARING	- Individuele machine en veiligheidscomponenten
Danmark	:EF ERKLÆRING OM OVERENSSTEMMELSE	- Enkle maskin og sikkerhedskomponenter
Sverige	:EG-DEKLARATION OM ÖVERENSSTÄMMELSE	- Individuell maskin och säkerhetskomponenter
Norge	:EF EVERENSSTEMMELSESERKLÆRING	- Individuel maskine og sikkerhedsudstyr
Suomi	:EY:N VAATIMUSTENMUKAISUUSILMOITUS	- Erilliset koneistot ja turvalaitteet
Hellas	:ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΣΕ ΟΔΗΓΙΑ ΤΗΣ ΕΥΡΩΠΑΙΚΗΣ ΚΟΙΝΟΤΗΤΑΣ	- Ανεξάρτητο μηχάνημα και εξαρτήματα ασφαλείας

We **KUKEN CO.,LTD.** -Osaka, Japan declare under our sole responsibility that the product: to which declaration relates, is in conformity with the requirements of the Council Directive of 22 June 1998 on the approximation of the laws of the Member States relating to machinery(2006/42/EC).

Nous **KUKEN CO.,LTD.**-Osaka, Japon déclarons sous notre seule responsabilité exclusive que le produit: auquel se réfère cette déclaration est conforme à la directive du conseil du 22 juin 1998, concernant le rapprochement des législations des états membres, relatives aux machines (2006/42/CE).

Wir **KUKEN CO.,LTD.**-Osaka, Japan erklären hiermit in alleiniger Verantwortung, daß das Produkt auf das sich diese Erklärung bezieht, den Anforderungen der "Richtlinie des Rates vom 22. Juni 1998 zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten für Maschinen (2006/42/EG) entspricht.

Nosotros **KUKEN CO.,LTD.**-Osaka, Japón declaramos bajo nuestra sola responsabilidad que el producto a que se refiere esta declaración, es conforme a los requisitos de la Directiva del Consejo de 22 de junio 1998 sobre la aproximación de las leyes de los Estados Miembros con relación a la maquinaria (2006/42/CE).

Noi **KUKEN CO.,LTD.**-Osaka, Giappone dichiariamo sotto nostra unica responsabilità che il prodotto cui questa dichiarazione si riferisce, è conforme ai requisiti della Direttiva del Consiglio del 22 Giugno 1998, sul ravvicinamento delle legislazioni degli Stati Membri relative alle macchine (2006/42/CE).

Nós **KUKEN CO.,LTD.**-Osaka, Japão declaramos sob nossa exclusiva responsabilidade que o produto a que se refere esta declaração está em conformidade com os requisitos da Directiva do Conselho de 22 de Junho de 1998 na avaliação das leis dos Estados Membros relacionadas com maquinaria (2006/42/CE).

Wij **KUKEN CO.,LTD.**-Osaka, Japan verklaren onder onze exclusieve verantwoordelijkheid dat het product waarop deze verklaring betrekking heeft, in overeenstemming is met de vereisten van de Richtlijn van de Raad van 22 juni 1998 inzake de onderlinge aanpassing van de wetgevingen van de Lid-Staten betreffende machines(2006/42/EG).

Vi **KUKEN CO.,LTD.**-Osaka, Japan erklærer herved under vort fulde ansvar at maskinen, som denne erklæring gælder for, er i overensstemmelse med de krav som findes i Ministerrådets direktiver af 22. Juni, 1998 om tilnærning af medlemsstaternes love vedrørende maskindirektivet (2006/42/EF).

Vi, **KUKEN CO.,LTD.**-Osaka, Japan förklarar härmed på vårt fulla ansvar att maskinen för vilken denna deklARATION gäller, överensstämmer med kraven i Ministerrådets direktiv av den 22 juni 1998 om harmonisering av Medlemsstaternas lagar rörande maskiner (2006/42/EG).

Vi **KUKEN CO.,LTD.**-Osaka, Japan erklærer under eget ansvar, at produktet hvortil denne erklæring relaterer seg, er i overensstemmelse med kravene i Rådets Direktiv av 22. juni 1998 vedr. tilnærmelse mellom medlemslandenes lover for maskiner (2006/42/EF).

Me **KUKEN CO.,LTD.**-Osaka, Japan vakuutamme olevamme yksinomisessa vastuussa siitä, että tämä tuote johon tämä ilmoitus viittaa on yhdenmukainen EY:n komission direktiivin, annettu 22 kesäkuuta 1998 kanssa, joka koskee yhteisön jäsenvaltioiden koneita koskevan lainsäädännön lähentämistä (2006/42/EY).

Εμείς **KUKEN CO.,LTD.**-Οζάκα, Ιαπωνία δηλώνει κάτω από τη μόνη ευθύνη μας ότι το προϊόν το οποίο αυτή η δήλωση αφορά, είναι σύμφωνα με τις απαιτήσεις της οδηγίας του Συμβουλίου της 22ας Ιουνίου 1998 σχετικά με την προσέγγιση των νομοθεσιών των κρατών μελών σχετικά με τα μηχανήματα (2006/42/EK).

Model / Modele / Modell / Modelo/
Modello / Modelo / Model / Model /
Typ / Model / Malli / Μοντέλο

PTS-450EX

Name of and position of issuer / Nom et fonction de l'émetteur / Name und Position des Erstellers /
Number y cargo del expedidor / Nome e posizione del dichiarante / Nome e cargo do emissor /
Naam en functie van de uitgever / Udsteder, navn og stilling / Usteders navn og stilling / Utfärdarens
namn och befattning / Ilmoituksen antajan nimi ja asema / Ονομα και θέση εκδότη

MASAHARU MATSUOKA / MANAGING DIRECTOR

Signature of issuer / Signature de l'émetteur / Unterschrift des Erstellers / Firma del expedidor /
Firma del dichiarante / Assinatura do emissor / Handtekening van de uitgever / Udsteder, underskrift /
Usteders signatur / Utfärdarens namnteckning / Ilmoituksen antajan allekirjoitus /
Υπογραφή εκδότη

KUKEN CO.,LTD.

MANAGING DIRECTOR

Ver. 110411E