English

THANKS FOR CHOOSING THIS PRODUCT

Durofix provides you with products at an affordable price, and we would like you to be fully satisfied with this product and our technical support. If any help or advice is needed, please kindly contact us.

INTENDED USE

This tool is intended for trained adult use only.

This screwdriver is designed to remove and install threaded fasteners.

RECOGNIZE SAFETY SYMBOLS, WORDS AND LABELS

The safety instructions provided in this manual are not intended to cover all possible conditions and practices that may occur when operating, maintaining and cleaning power tools.

Always use common sense and pay particular attention to all the **DANGER**, **WARNING**, **CAUTION** and **NOTE** statements of this manual.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER — **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING — **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION — **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE — **NOTE** provides additional information that is useful for proper use and maintenance of this tool. If a NOTE is indicated make sure it is fully understood.

WARNING LABEL IDENTIFICATION

Read Manuals Before Operating Product.

Wear Eye Protection.

Wear Hearing Protection.

English

 Wear Dust Mask.

 Power tools can vibrate in use.

 Keep body stance balanced and firm. Do not overreach when operating this tool.

 Recycling

 Do not drop the battery and charger into trashcan.

IMPORTANT SAFETY RULES

⚠ DANGER

When using power tools, always prevent exposure and breathing of harmful dust and particles.

WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products, and arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

WARNING: Handling the power cord on corded products may expose you to lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling*.**

GENERAL SAFETY RULES

⚠ WARNING **Read all safety warnings, instructions, illustrations and specifications provided with this power tool**. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

WORK AREA

⚠ WARNING

Keep work area clean and well lit. Cluttered and dark areas invite accidents.

Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.

Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

⚠ WARNING

a. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

b. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock

c. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

d. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

e. **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

f. **NOTE** The term "residual current device (RCD)" can be replaced by the term "ground fault circuit interrupter (GFCI)" or "earth leakage circuit breaker (ELCB)".

PERSONAL SAFETY

⚠ WARNING

a. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

b. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

d. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

e. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the

power tool in unexpected situations.

f. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust-related hazards.

h. **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

TOOL USE AND CARE

⚠ WARNING

a. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.

b. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

c. **Do not use tool if switch does not turn it on or off.** A tool that cannot be controlled with the switch is dangerous and must be repaired.

d. **Disconnect battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

e. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

f. **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.**

Many accidents are caused by poorly maintained power tools.

g. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

h. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

i. **Keep handles and grasping surfaces dry, clean and free from oil and grease.**

Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

j. **When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause sparks, burns, or a fire.

k. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edge are less likely to bind and are easier to control.

l. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

m. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may create a risk of injury when used on another tool.

BATTERY TOOL USE AND CARE

⚠ WARNING

a. **Ensure the switch is in the off position before inserting battery pack.** Inserting the battery pack into power tools that have the switch on invites accidents.
b. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
c. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
d. **When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
e. **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
f. **Do not use a battery pack or tool that is damaged or modified**. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
g. **Do not expose a battery pack or tool to fire or excessive temperature**. Exposure to fire or temperature above 130 °C may cause explosion. NOTE The temperature „130 °C“ can be replaced by the temperature „265 °F“.
h. **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

SERVICE

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel may result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of shock or injury.

SPECIFIC SAFETY RULES AND SYMBOLS

⚠ CAUTION

Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring. Contact with 'live' wire will also make exposed metal parts of the tool 'live' and shock the operator.

Be aware that this tool is always in an operating condition, because it does not have to be plugged into an electrical outlet. Always set the trigger switch to the locked OFF position when installing or removing the battery pack or bits.

Do not use bits or sockets larger than those recommended. Large bits or drills may overload the wrench/driver and damage the motor and gears.

English

Do not use if chuck jaws or other parts are cracked or worn.

Never change direction of rotation until motor has completely stopped.

Never hold work in your hand, lap, or against other parts of your body when driving.

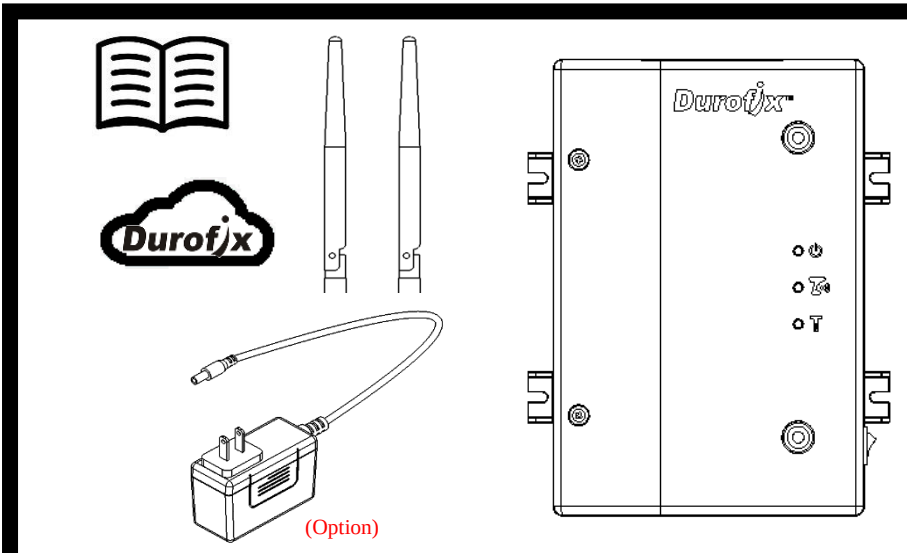
Do not use drill as a router or try to elongate or enlarge holes by twisting the drill bit. Drill bits may break and cause injury.

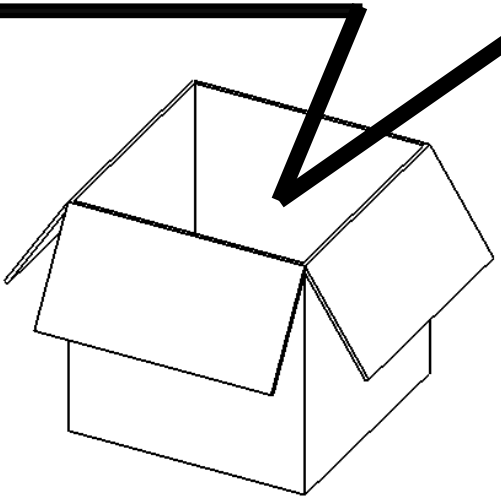
Keep hands away from rotating parts.

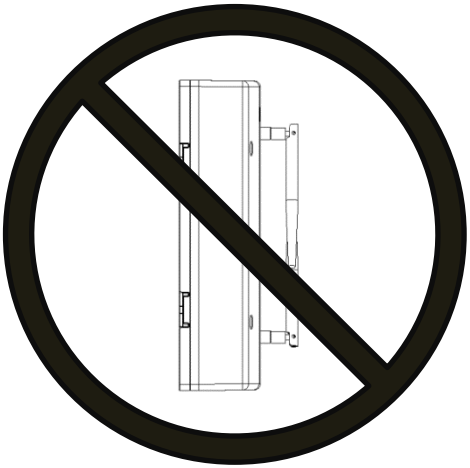
Keep drill bit clear of yourself and all objects while installing and removing bit.

Some wood contains preservatives which can be toxic. Take extra care to prevent inhalation and skin contact when working with these materials. Request, and follow, all safety information available from your material supplier.

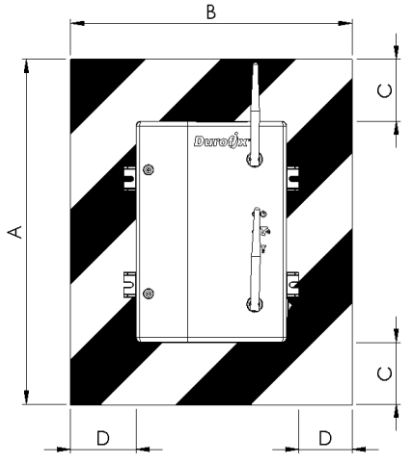
HARDWARE

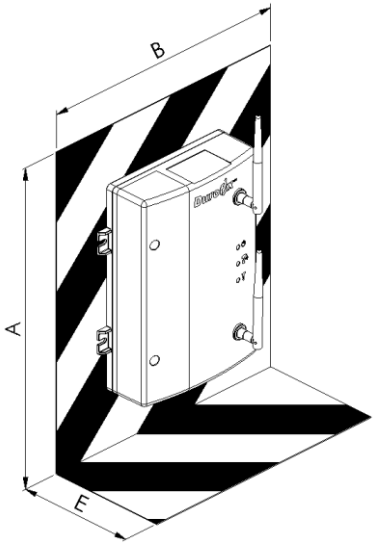


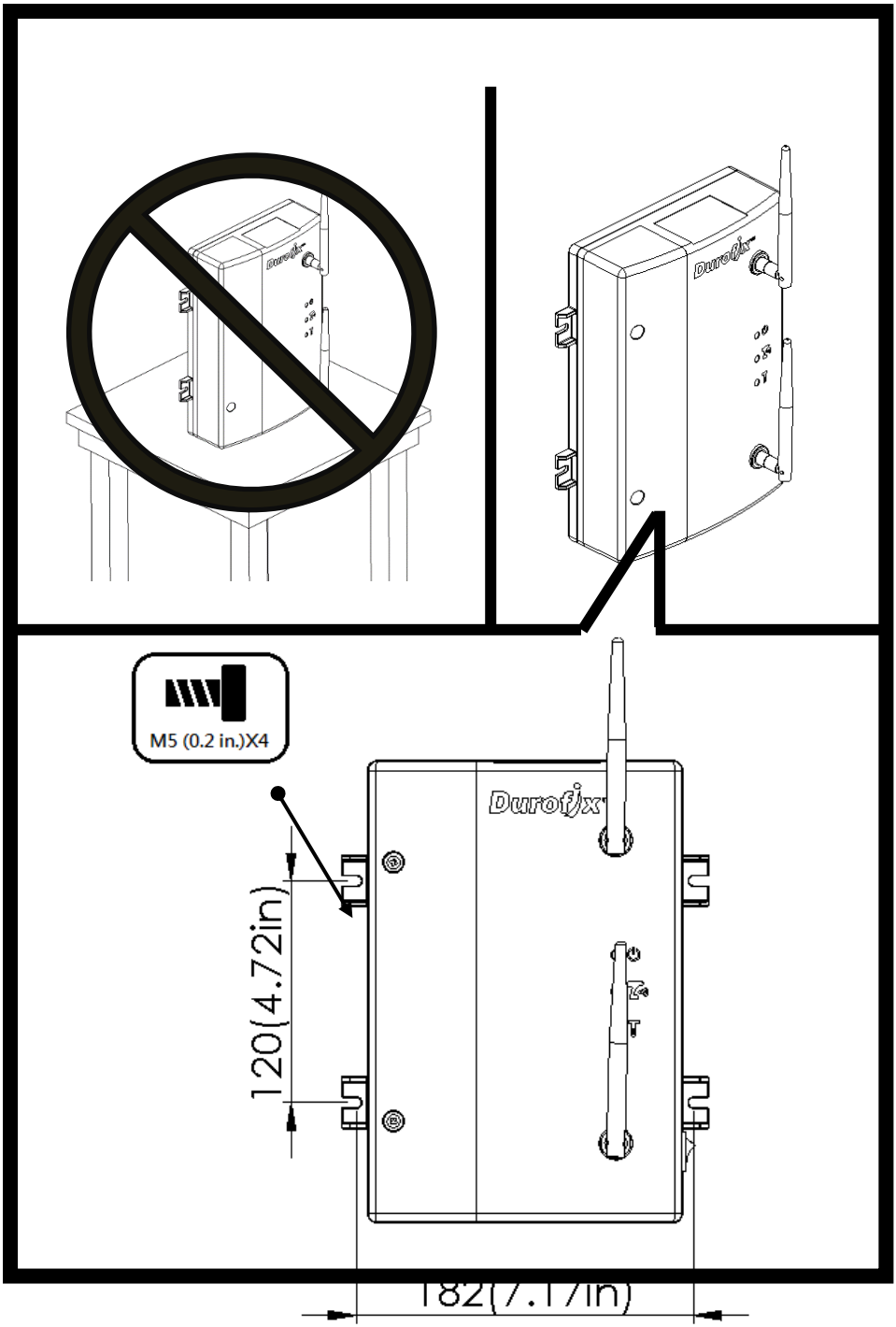


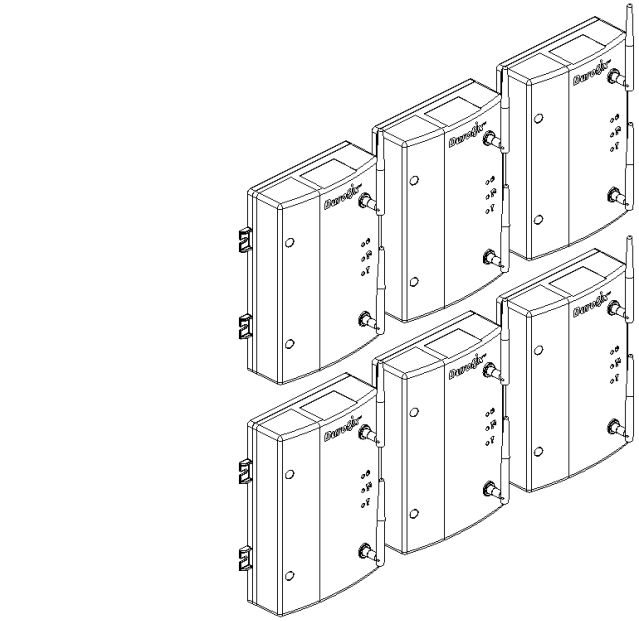


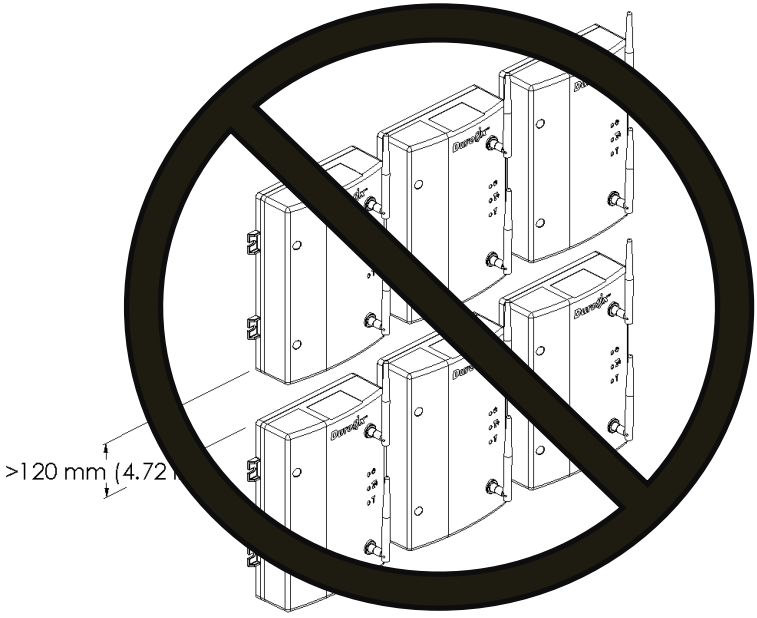
A = 390.15 mm (15.36 in.)
B = 278 mm (10.94 in.)
C = 70 mm (2.76 in.)
D = 60 mm (2.36 in.)
E = 149 mm (5.87 in.)

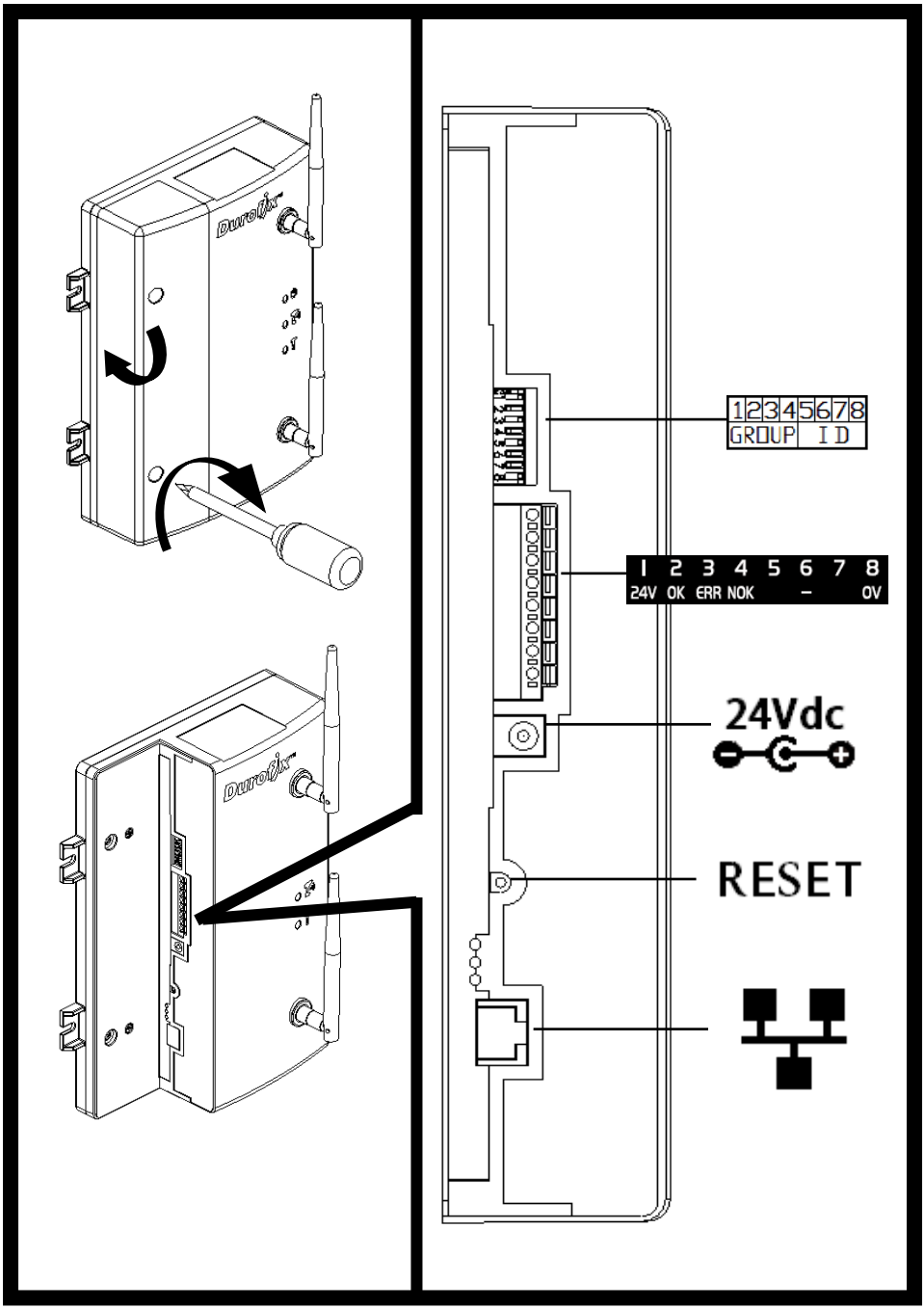


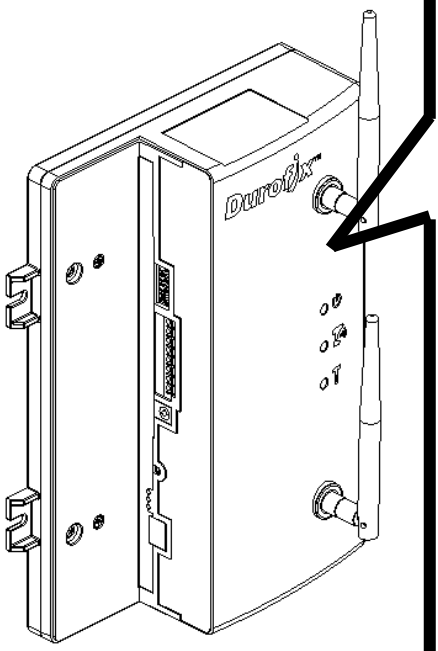



M5 (0.2 in.)X4
120(4.72in)
182(7.17in)




>120 mm (4.72

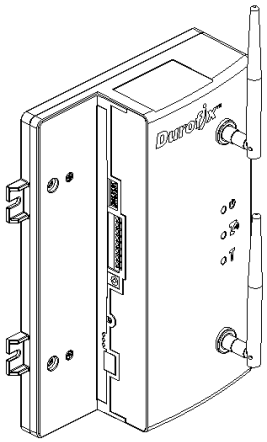

1 2 3 4 5 6 7 8
GROUP ID
1 2 3 4 5 6 7 8
24V OK ERR NOK – 0V
24Vdc
RESET



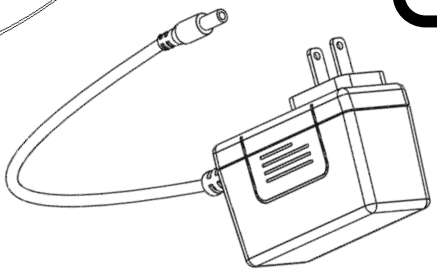
Power

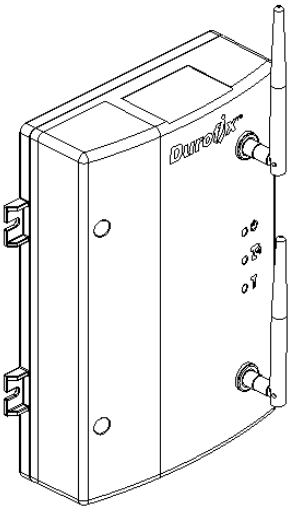
Status

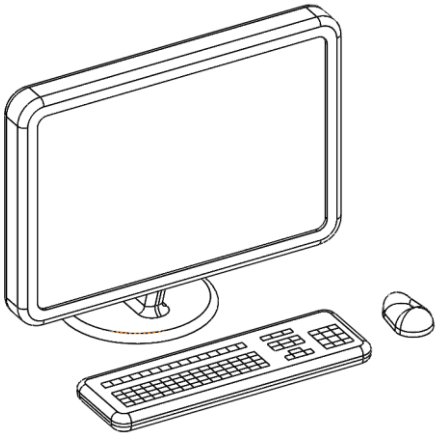
OK or NG



INPUT : 100-240V 50/60HZ 0.65A
OUTPUT : 21-27V ⎓ 1.19-0.92A



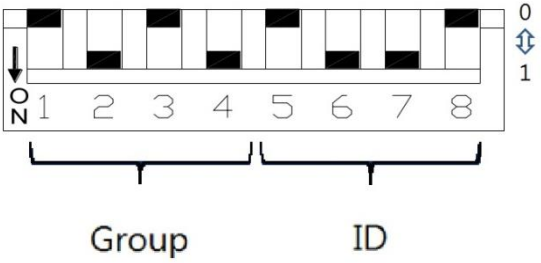




IO CONNECTION

1.1 Setting Group & ID

Tool and DR002 need to designate the same group and ID for pairing. DR002's dip switch is binary: ON is 1, OFF is 0. Left-four-digits set group. Right-four-digits set ID. For example, below figure shows group5 and ID6's setting.



Digit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Binary	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111

Tool's group & ID setting may refer to tool's instruction.

1.2 IO Connector

There are 5 active IO ports, defined as below figure. User could power the DR002 by AC adapter or IO connector's 24/0V ports.

1	2	3	4	5	6	7	8
24V	OK	ERR	NOK		—		0V

OK port: output a 0.5 second signal when receiving an OK-fasten from tool.

ERR port: output a 1 second signal when receiving an error from tool.

NOK port: output a 1 second signal when receiving a NOK-fasten from tool.

1.3 Indicators

Power: blue indicator shows power on.

Status: green indicator shows tool and DR002 are paired. Indicator will be off when tool and DR002 disconnect over 10 seconds. If tool went error indicator blinks red.

Fasten: if fasten OK, indicator shows green light 0.5 second. If fasten NOK, indicator shows red 1 second.

1.4 Reset Button

Long press reset button 6 seconds and gateway indicator will be flash rapidly. Release button and the gateway is already be reset to default.

1.5 RJ45 Connector

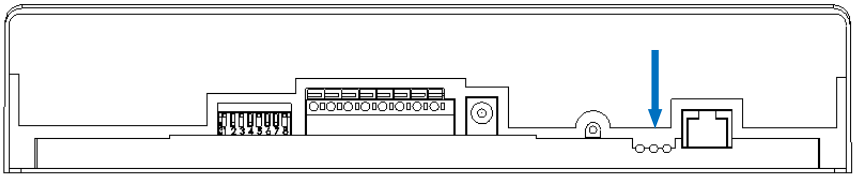
Plug RJ45 cable to connect DR002 and local area network.

1.6 Gateway Indicators

Red: when DR002 power-on the indicator shows steady red. After initialised the indicator blinks once per second. If DR002 is set DHCP to get IP, the steady red indicator means cannot get IP to initialise.

Green: when DR002 successfully connect to host in TCP mode the green indicator off. Green indicator steady on means the connection is not built successfully. User should check network setting or the RJ45 cable plug well.

Blue: when Bluetooth started to scan devices indicator start blinking. Indicator blinking fast means many devices are scanned.



SOFTWARE INSTALLATION

2.1 Install Microsoft .NET Framework 4.7.2 Developer Pack

Double click (NDP472-DevPack-ENU.exe) to install. Check accept clauses and terms to finish installation.

2.2 Install Application

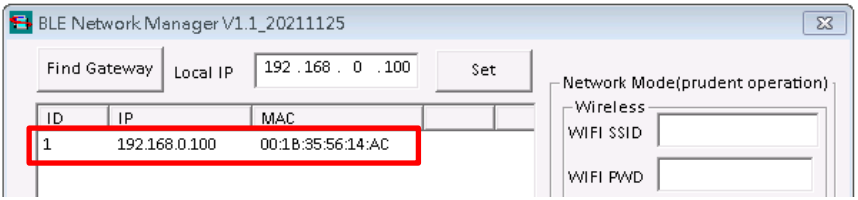
Double click (DurofixBLE_Setup.msi) to install.

NETWORK SETTING

3.1 Inquiry DR002 IP

The default DR002 is static IP (192.168.0.100) and host IP is 192.168.0.111. User should put DR002 and user's computer in the same local area network.

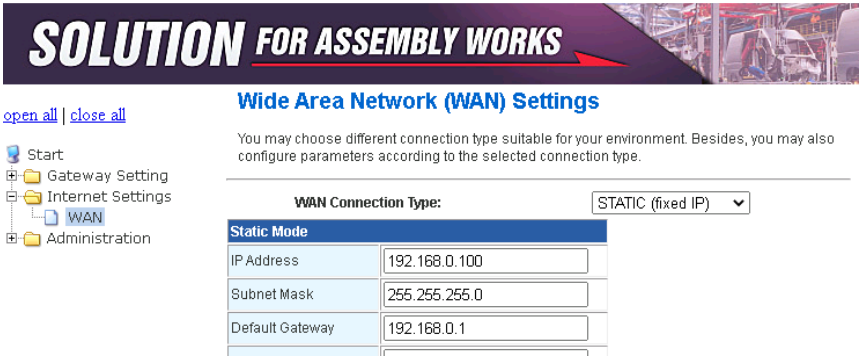
Although default IP 192.168.0.100, user could find DR002's IP by (BLEGatewayManage EN) in file package.



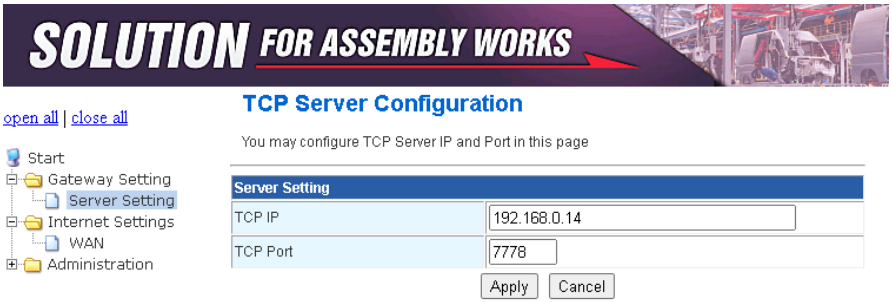
3.2 DR002 network setting

Open browser and key in DR002 IP address (ex. 192.168.0.100 as previous case). The user name and password are both “admin” and enter setting page.

In the “Internet Settings” page, user can choose STATIC (fixed IP) or DHCP (Auto config). User can reassign a static IP to DR002 in the IP address column, or change to DHCP to get IP automatically. (If DHCP, user can inquiry DR002 IP by (BLEGatewayManage EN).



Go to “Gateway Setting” page. Key-in Host (user’s computer) IP in TCP IP column (The TCP IP and port will be key-in in later programme system setting).



Apply the setting and reboot DR002.

WINAPP PROGRAMME

4.1 Programme Front-page

Menu: the programme main function

a. Home: the programme initial screen
b. Function menu: there are 3 sub-menus - “Tool Setting Mode”, “Tool Monitor Mode”, and “System Setting”.

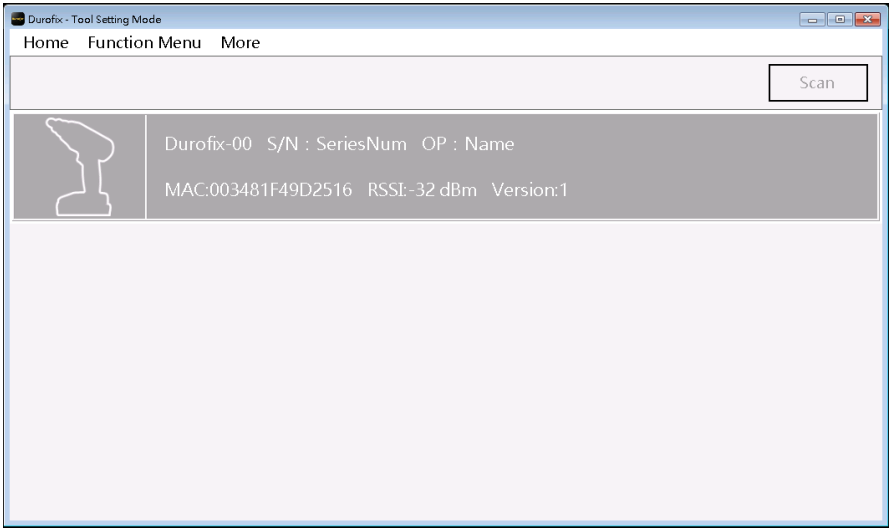
   Once the programme runs, user need go to “System Setting” page to set up communication mode first.

c. More: NG/Error code instruction.

4.2 Tool Setting Mode

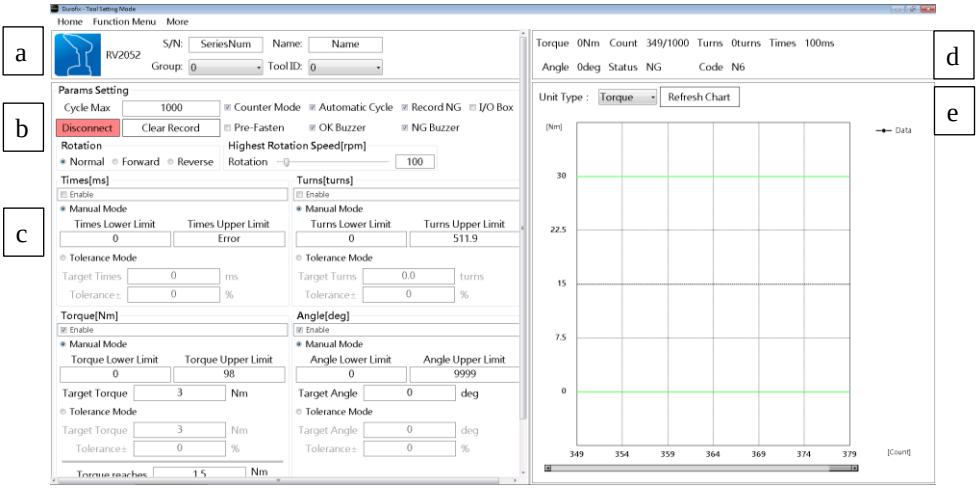
Tool setting mode consists of tool-searching page and parameters-setting page. Tool-searching page is initial page in the tool setting mode. Click upright button “scan” to search tool and every started tool will be shown in the column. Double-click the tool bar to go to parameters-setting page.

A. Tool-searching page



a. Scan: searching Bluetooth tools.
b. Tool bar: a looked-up tool's identity is shown. User can double-click the tool icon to enter parameters-setting page.

B. Parameters-setting page



a. Tool identity information: this is tool identity. Click the dialogue box of S/N and Name to key in words. Draw the Group and Tool ID option box to set up tool's identity.
b. Tool working feature setting: check the box to set up tool's working features. User can click "Disconnect" button to return to tool-searching page.

Cycle Max	user can set up max rundown cycle limit
Counter Mode	If not active, the tool won't record any rundown data.
Automatic Cycle	If active, the cycle number will recycle automatically after reach cycle max. If not active, the tool will halt and cannot be triggered when reach cycle max and need to clicks "Clear Record" manually to enable tool work.
Record NG	If active, the NG rundown will be count into cycle.
Pre-Fasten	If active, it allows user double-hit in a very short time, but NG indicator disables.
OK Buzzer	Enable/disable buzzer in OK rundown.
NG Buzzer	Enable/disable buzzer in NG rundown.
I/O Box	Enable communication with IO connectors.
Rotation	User can enable/disable tool's specific rotation direction.
Highest Rotation Speed	Tool free speed from tool start to shift-down torque reached.

c. Tool fastening setting: there are 4 features to control or monitor tool's working behaviour. There are manual and tolerance modes in each control/monitor features. User Key in upper/lower limit manually especially in single-side control, or give a target and a range of tolerance in tolerance mode. User can set up shift-down torque and shift-down speed as well.

Times[ms]	User can monitor rundown time or turns to prevent cross-thread, double-hit or blind hole.
Turns[turns]	
Torque[Nm]	Default mode, tool will shut-off when torque target value reached.
Angle[deg]	If enable, tool will turn additional setting angle degree whilst setting torque target reached.

d. Fasten data: when a fastening done it will show the fasten information.

e. Diagram: user can watch the fastening information by run chart. Left click on Y-axis to change its unit.

4.3 Tool Monitor Mode

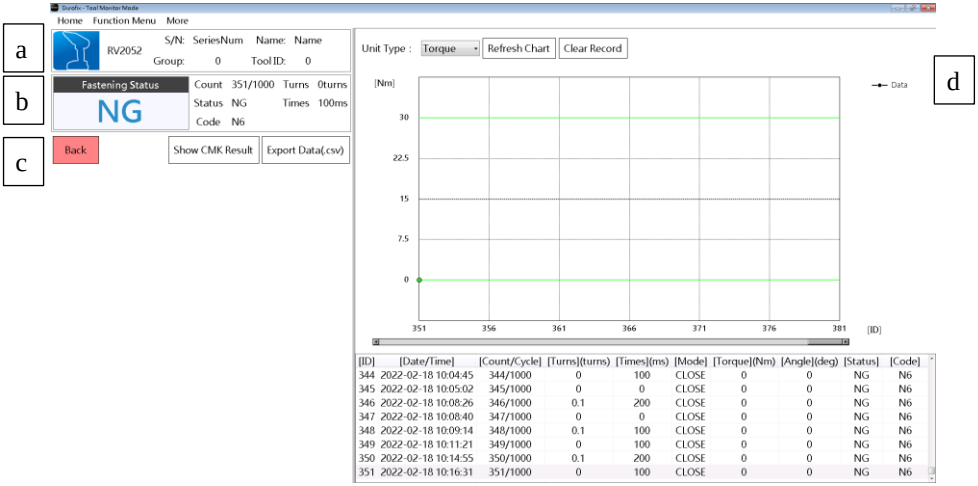
There are two ways to monitor tool: multiple tools and single tool. If the tool's group setting is not the same to the chosen in multiple tools page, the tool doesn't connect to the programme. User can double click the tool icon to enter to single tool monitor page.

A. Multiple tool page

a. Choose group which tools user planning to monitor are designated.

b. If check “Automatic Record Fastening Data”, a *.CSV file will be made automatically in the path of C:\HisData when the set tool’s cycle max number is reached. (Ex: 2022-02-22 1221_RV2052_Group[1]_ID[0].csv)

B. Single tool page



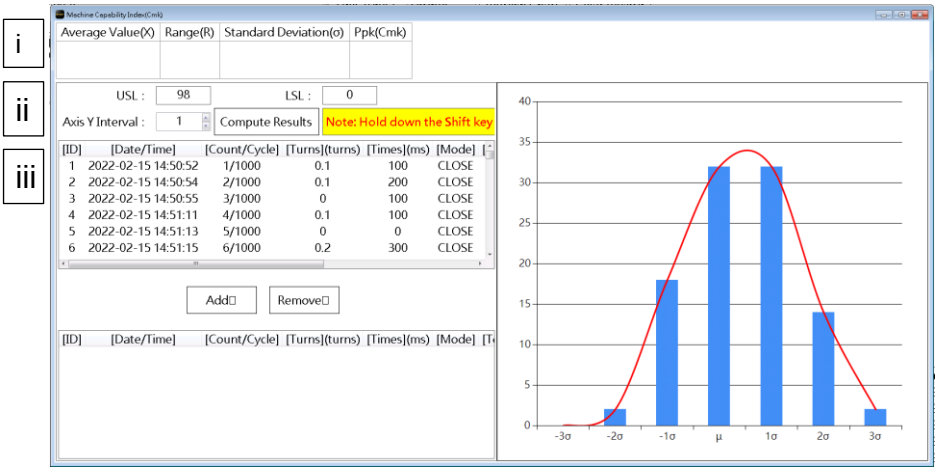
a. Tool identity information: showing tool identity.

b. Fasten statue: showing fasten statue while any fasten triggered done.

c. Option: user can return to multiple tool page, calculating CMK, or export fasten data (CSV format).

d. Run chart: fasten data run chart. User can change unit to display different fasten data.

CMK operation:



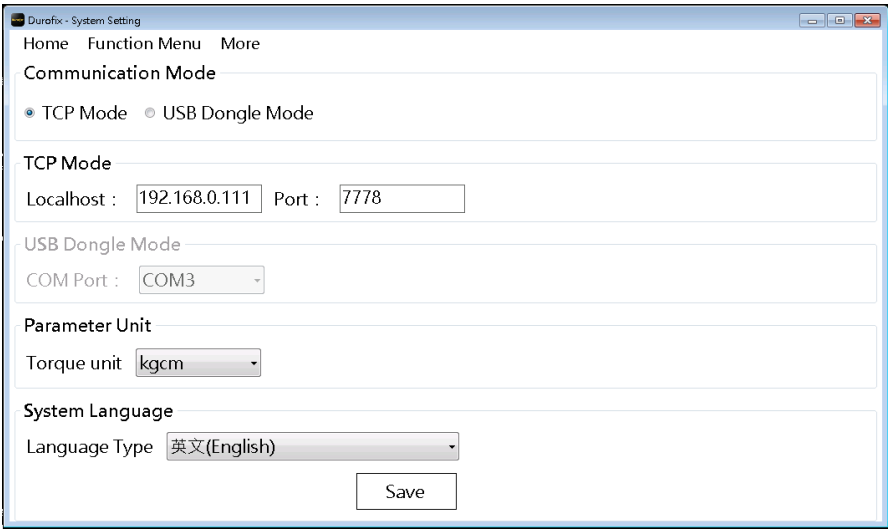
i. Statistics data

ii. Operations: adjust histogram Y-axis interval. Click the button to compute Ppk(Cmk)

iii. Data base: Fasten data tool memorised (1000 max) are shown in upper column. User selects data which user would like to calculate Ppk(Cmk) and add or remove to lower column to calculate.

iv. Histogram: the histogram and distribution chart that selected data output.

4.4 System Setting

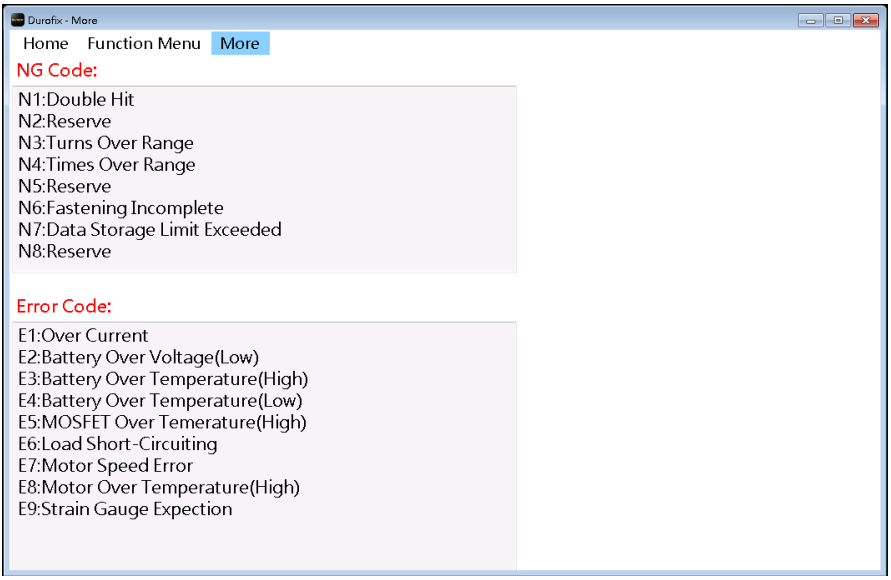


A. Communication mode: set TCP mode or USB Dongle mode to communicate with DR002 controller or tool. The Local host IP and port must be same to previous DR002 network setting.
B. Unit: Nm, ft-lb, in-lb, kgcm are provided to select.
C. System language: Traditional Chinese, Simple Chinese, or English are provided to select.

After setting, click “Save” button to save and return.

4.5 More

Fasten NG codes or tool error codes are referred for user to trouble-shooting.



NOTE Only do tool and controller be pairing during both set on the same Group and ID. Do not set all tools or controllers on the same one Group and ID. More than two tools or controllers setting on the same one Group and ID means they are in the same channel and users could not tell which signals come from which tools.

MAINTENANCE

⚠ DANGER Incorrect disassembly, reassembly or adjustment can cause not only insufficient power but also accidents. Ask for these services from an authorized service centre. The maker or supplier will not be held liable for any damages caused by factors found to be the cause of faulty use or repair by

users or unauthorized service provider.

IMPORTANT

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustments should be performed by certified service centres or other qualified service organisations, always using identical replacement parts.

PROTECTING THE ENVIRONMENT

Before disposing of damaged, check with your state Environmental Protection Agency to find out about special restrictions on the disposal of tool or return them to a certified service centre for recycling.

DUROFIX™

For technical support please call: +1 877 693-8665

Service Address: Durofix Inc

9168 Pittsburgh Avenue

Rancho Cucamonga, CA 91730

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