



- 76190-5000
- 76190-5220

ELECTRONIC TORQUE-CONTROLLED TUBE ROLLER



OPERATING INSTRUCTIONS & SERVICE MANUAL

Rev: A, 5/11/2007

TO REDUCE THE RISK OF INJURY AND EQUIPMENT DAMAGE
USER MUST READ AND UNDERSTAND OPERATOR'S MANUAL.

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SAFETY INSTRUCTIONS



WARNING!

READ AND UNDERSTAND ALL INSTRUCTIONS

Failure to follow all instructions listed below, may result in accident, fire and/or personal injury.

SAVE THESE INSTRUCTIONS

1. **KNOW YOUR POWER TOOL.** Read this service manual carefully.
2. **GROUNDING INSTRUCTIONS.** This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.
3. **KEEP GUARDS IN PLACE** and in working order.
4. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
5. **AVOID DANGEROUS ENVIRONMENT.** Keep work areas well lit.
6. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, high or locked-up place – out of reach of children.
7. **DON'T FORCE TOOLS.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOLS.** Don't force small tool or attachment to do the job of a heavy-duty tool.
9. **WEAR PROPEL APPAREL.** No loose clothing or jewelry to get caught in moving parts. Rubber gloves and footwear are recommended when working outdoors.
10. **USE SAFETY GLASSES** with most tools. Also face or dust mask if cutting operation is dusty.
11. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
12. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hands to operate tool.
13. **DON'T OVERREACH.** Keep proper footing and balance at all times.
14. **MAINTAIN TOOL WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. **DISCONNECT TOOLS:** When not in use; before servicing; when changing accessories such as blades, bits, cutters, etc.
16. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking that keys and adjusting wrenches are removed from tool before turning it on.
17. **AVOID ACCIDENTAL STARTING.** Don't carry plugged-in tool with finger or switch.
18. Remove the plug from the socket before carrying out any adjustment, servicing or maintenance.
19. Do not use unit with combustible fluids or where combustible fluids or fumes may be present.

SETUP

1. Attach the Side Handle to the Roller Gun.
2. Connect the rolling motor to the control box with multi-pin plug. Make sure the nut is locked in tightly.
3. Remove the power cord from the inside of the electronic torque control box. Connect the female end of the power cord to the power receptacle on the control box. The male end of the power cord should be connected to a properly grounded power supply receptacle in the work area.

IMPORTANT - Make sure the electrical current supplied matches the electrical requirements of the rolling motor and the control box.

CAUTION - If using an extension cord, avoid excessive lengths and/or undersized wire gauge cords. Both can cause the equipment to operate incorrectly.

4. Switch the control box power to the “on” position. The switch will light up red and the LCD will show flickering “P”, this is the standby condition.
5. Depress the trigger of the electric rolling motor and allow the motor to run, without load, for approximately 1 minute. This will allow the motor to “warm up”, reducing the amp draw.
6. Press “Set” button five times (from the “P”): LCD shows “E”, this is the free running torque setting. Pull the trigger and hold it for 5 seconds, the box will collect the free running torque and will show the number on the LCD. Push “Enter” to memorize it.

IMPORTANT - This data wont be lost event if the power is turned off and on. If at any time you need to re-set this number then Press either “▲” or “▼” and then start collecting the data. All reference settings must be higher than this collected free running torque readout for the motor to operate.

7. Press “Set” button three times (from the “E”): LCD shows “P”, this is again the standby condition.
8. Press “Set” button one time (from the “P”): LCD shows “A”, this is the adjustable reversing time (1 to 99 seconds). Adjust it by pressing “▲” or “▼”, press “Enter” to record.
9. Press “Set” button two times (from the “P”): LCD shows “b”, this is the adjustable reversing interval (1 to 99 seconds), the down time before the motor starts reversing. Adjust it by pressing “▲” or “▼”, press “Enter” to record.
10. Press “Set” button three times (from the “P”): LCD shows “C”, this is the adjustable coarse torque reference setting (free running torque to 999). Adjust it by pressing “▲” or “▼”, press “Enter” to record.

IMPORTANT - The coarse torque setting increments in units of ‘50’ and the fine torque setting increments in units of ‘1’.

11. Press “Set” button four times (from the “P”): LCD shows “d”, this is the adjustable fine torque reference setting (free running torque to 999). Adjust it by pressing “▲” or “▼”, press “Enter” to record.

IMPORTANT - The coarse torque setting increments in units of ‘50’ and the fine torque setting increments in units of ‘1’.

SETUP CONT.

12. Press “Set” button six times (from the “P”): LCD shows “F”, this is the self learning function.
CAUTION - This setting should not be used without first consulting the Thomas C. Wilson, Inc. factory.
13. Press “Set” button seven times (from the “P”): LCD shows “0000”, this is the cycle counter. Press “Enter” to reset to zero.
14. “REV” button is to force reverse the rolling motor. When the button is pressed the LCD shows solid “F” and the motor will reverse as you pull the trigger.

EXPANDING OPERATION

- I.
1. Attach the appropriate T.C. Wilson expander to the motor via the 1/2" Square quick connector.
 2. Determine the expansion rate. The Calculated Rolled ID.
 3. Set the reference torque setting 15-30 higher than the collected "free running torque" and expand the tube.
IMPORTANT - The control box should be in standby condition. Flickering "P" on the LCD in order to start tube rolling.
 4. Measure the rolled ID to confirm the amount of expansion achieved. Adjust the torque setting either up or down as required, and roll the second tube.
 5. Continue step "4" until the actual rolled ID is near the calculated rolled ID.
 6. After achieving the proper rolled ID for approximately 10 tubes, go back and re-roll the first trial tubes that were under rolled.
IMPORTANT - Do not roll the same tube several times when establishing the proper control setting. The tube will work harden and not reflect an accurate torque reference.
- II. When rolling a tube:
1. Press and hold the trigger of the rolling motor to start the rolling process.
 2. As the tube is expanded the reference readout number will increase. Once the reference readout matches the reference setting, the torque control automatically stops the rolling motor.
 3. The motor will automatically reverse after the pause (set by reversing interval). The motor trigger should remain pressed.
 4. Reverse time is determined by reversing time setting.
 5. Reset the motor by releasing the trigger and continue on to the next tube.

OPERATION



Flickering "P", this is the standby condition



LCD shows "A", this is the adjustable reversing time (1 to 99 seconds)



LCD shows "b", this is the adjustable reversing interval (1 to 99 seconds), the down time before the motor starts reversing



OPERATION



LCD shows “d”, this is the adjustable fine torque reference setting (free running torque to 999)



IMPORTANT - The coarse torque setting increments in units of ‘50’ and the fine torque setting increments in units of ‘1’

LCD shows “C”, this is the adjustable coarse torque reference setting (free running torque to 999)



LCD shows “E”, this is the free running torque setting

LCD shows “0000”, this is the cycle counter



SPECIFICATIONS

ROLLER MODEL	76189-5000	41238-5000	22488-5000
TUBE OD SIZE	0.5" - 1.5" (12.7mm - 38.1mm)	1" - 2.5" (25.4mm - 63.5mm)	2" - 3" (50.8mm - 76.2mm)
VOLTAGE	110	110	110
FREQUENCY	60	60	60
AMPERAGE	7	10	7.5
FREE LOAD RPM	500	250	100
DRIVE SPINDLE	1/2" Round	# 3 Morse Taper	# 4 Morse Taper
WEIGHT	6.8 LBS (3.1kgs)	19 LBS (8.6kgs)	23.5 LBS (10.6kgs)

ROLLER MODEL	76189-5220	22487-5220	22488-5220
TUBE OD SIZE	0.5" - 1.5" (12.7mm - 38.1mm)	1" - 2.5" (25.4mm - 63.5mm)	2" - 3" (50.8mm - 76.2mm)
VOLTAGE	220	220	220
FREQUENCY	50	50	50
AMPERAGE	7	4	4
FREE LOAD RPM	500	250	100
DRIVE SPINDLE	1/2" Round	# 3 Morse Taper	# 4 Morse Taper
WEIGHT	6.8 LBS (3.1kgs)	19 LBS (8.6kgs)	23.5 LBS (10.6kgs)

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