OPERATION MANUAL
Connecting up to 1" Uponor Multi-layer Composite (MLC) Tubing
This Operation Manual is published for builders and contractors interested in Uponor radiant heating systems. This manual describes general installation recommendations that use Uponor Multi-layer Composite (MLC) tubing (formerly MultiCor®) and corresponding MLC tubing fittings (formerly MultiPress™). Be sure to follow local code requirements.

Uponor has used reasonable efforts in collecting, preparing and providing quality information and material in this manual. However, system enhancements may result in modification of features or specifications without notice. For the most current technical information, go to the Uponor website at www.uponor-usa.com.

Uponor is not liable for installation practices that deviate from this manual or are not acceptable practices within the mechanical trades. Refer to the Uponor Radiant Floor Heating Installation Handbook for proper installation methods for Uponor MLC tubing.

Please direct any questions regarding the suitability of an application or a specific design to your local Uponor representative. For the name of your local representative, call toll free (800) 321-4739.
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Section 1
Overview

The Mini-Press Battery Tool is an electro-hydraulic tool that makes fast, easy connections to $\frac{1}{2}$” through 1” Uponor Multi-layer Composite (MLC) tubing (formerly MultiCor®).

Tool Kit Components
The Mini-Press Battery Tool Kit with Jaws (D6261632) features the following components.
- Mini-Press Battery Tool
- $\frac{1}{2}$” press jaws (replacement part D6260500)
- $\frac{3}{4}$” press jaws (replacement part D6260625)
- $\frac{3}{4}$” press jaws (replacement part D6260750)
- 1” press jaws (replacement part D6261000)
- Two batteries 9.6V (replacement part D6260001)
- One battery charger (replacement part D6260002)
- Operation Manual
- Carrying Case

The Mini-Press Battery Tool Kit without Jaws (D6260000) features the following components.
- Mini-Press Battery Tool
- Two batteries (replacement part D6260001)
- One battery charger (replacement part D6260002)
- Operation Manual
- Carrying Case

Note: If any contents listed are missing or damaged, contact your Uponor sales representative or distributor for assistance.

Importantly: To protect the tool and its accessories, keep all tool components in the carrying case.

Important Information
For safety reasons, always start the tool with a press jaw on it.
Section 2
Technical Data

Mini-Press Battery Tool
- Dimensions (with jaws) . . .3” W x 4” H x 18” L
- Weight . . . . . . . . . . . . . . . .5.5 lbs. (2.5 kg)
- Maximum Tubing Size . . . .1”
- Pressing Time . . . . . . . . . . .3 to 4 seconds
- Thrust Force . . . . . . . . . . .3,372 lbf. (15 kN) (linear)
- Hydraulic Oil . . . . . . . . . . .Shell Tellus T 15 or equivalent
- Operating Range . . . . . . . . . .50 to 104°F (10 to 40°C)
- Storage Range* . . . . . . . . . . .50 to 104°F (10 to 40°C)
- Sound Level . . . . . . . . . . .<70 dB
- Vibrations . . . . . . . . . . .<2.5 m/s²
*Storing the battery in temperatures below 50°F (10°C) greatly reduces battery capacity.

Battery
- Voltage . . . . . . . . . . . . . . . .9.6 Volts DC
- Capacity . . . . . . . . . . . . . . . .1.3 Ah
- Charging Time . . . . . . . . . . .40 minutes
- Cycles per Charge . . . . . . . . . . .65 cycles
- Operating Range . . . . . . . . . . .50 to 104°F (10 to 40°C)

Battery Charger
- Frequency . . . . . . . . . . . . . . . .50 to 60 Hz
- Output Voltage . . . . . . . . . . .7.2 to 12 V
- Charging Current . . . . . . . . . . .3 A
- Trickle Charge . . . . . . . . . . . .60 mA
- Charging Time . . . . . . . . . . .40 minutes
- Weight . . . . . . . . . . . . . . . .1.1 lbs. (0.5 Kg)
Section 3
Battery Operation

Charging the Battery
Only use the included charger to charge the battery for the Mini-Press Battery Tool. Charge the battery before initial operation.
1. Remove the charger from the case.
2. Plug the charger into a standard outlet.
3. Ensure the vent slots in the top and bottom of the charger are not obstructed.
4. Insert the battery into the charger (+ pole to + pole) with minimum force.
5. The green light-emitting diode (LED) on the right side of the charger (opposite the + pole) illuminates to indicate the battery is charging.

Recharge time takes approximately 40 minutes. The green LED will turn yellow when the battery is 90% charged. Once charging is complete, the LED turns green and flashes. Refer to Table 3-1 on page 6 for additional LED definitions.

Note: Battery temperature increases during and shortly after use. Batteries may not accept a full charge if they are charged immediately after use. Allow the battery pack to cool to room temperature before charging.

Caution: Do not use the charger at ambient temperatures of less than 50°F (10°C) or greater than 104°F (40°C).

Battery Handling
The Mini-Press Battery Tool uses rechargeable batteries containing nickel cadmium (NiCad) cells. To effectively and properly use the batteries, keep the following in mind.
• Recharge cool batteries only.
• The battery can recharge 1,000 times, and reaches full capacity after several charges.
• Store batteries at temperatures greater than 50°F (10°C), but less than 104°F (40°C), to optimize battery life.
• Only recharge the battery after it is drained of power.
• Do not use the charger if dropped or damaged.
• Do not connect two chargers together.
• Keep the battery in a frost-free, dry place.
Section 4
Tool Operation and Guidelines

Installing and Changing Press Jaws
Refer to the following instructions to properly install and change press jaws.

Note: Use only Uponor Mini-Press Battery Tool Press Jaws on the Mini-Press Battery Tool. Using any other jaws will void the warranty.

⚠️ Warning: Prior to changing the jaws, remove the battery to make sure the tool doesn’t turn on.

1. Select the proper size press jaw for the application.

Note: Prior to installing the press jaws, check the head and jaws for damage or excessive wear. Never use a damaged tool or jaws.

2. Disengage the locking pin by simultaneously pushing it in and turning it counterclockwise.

3. The spring-loaded pin will pop out of its holder.

4. Insert the appropriate press jaw into the head, and push the locking pin back into its proper position.

⚠️ Warning: Ensure the locking pin is securely in place. Failure to do so can cause personal injury or damage to the tool.

Tool Operation
Refer to the following instructions to operate the Mini-Press Battery Tool.

1. Before using the Mini-Press Battery Tool, always perform a test connection. Ensure the tips of the jaws close completely after completing the connection. If the jaws do not close properly, refer to the Troubleshooting section on page 9 for information.

2. After mounting the fitting on the tubing, open the jaws by manually compressing them at the base near the tool body.

3. Position the jaw on the fitting.

4. Actuate the trigger to start the pressing cycle.

5. Continue holding the trigger until the pressing cycle is complete (visually check to ensure the tips of the jaws are completely closed).

6. Once the pressing cycle is complete, release the trigger.

Charging Indicators
Two LEDs signal the charger’s status. Refer to Table 3-1 for the LED definitions.

<table>
<thead>
<tr>
<th>Left LED (Opposite + Pole)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Red</td>
<td>Charger has power and is ready for operation.</td>
</tr>
<tr>
<td>Flashing Red</td>
<td>Charger is defective.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Right LED (Below + Pole)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Green</td>
<td>Battery is charging.</td>
</tr>
<tr>
<td>Solid Yellow</td>
<td>Battery is 90% charged.</td>
</tr>
<tr>
<td>Flashing Green</td>
<td>Battery is completely charged.</td>
</tr>
<tr>
<td>Flashing Red and Green</td>
<td>Charging stopped due to an extreme temperature</td>
</tr>
<tr>
<td></td>
<td>condition.</td>
</tr>
<tr>
<td>Solid Red</td>
<td>Battery is defective.</td>
</tr>
<tr>
<td>Flashing Red</td>
<td>Battery is too hot or too cold. Remove the</td>
</tr>
<tr>
<td></td>
<td>battery immediately and wait for battery</td>
</tr>
<tr>
<td></td>
<td>temperature to reach between 50 and 104°F (10</td>
</tr>
<tr>
<td></td>
<td>to 40°C).</td>
</tr>
<tr>
<td>LED Off</td>
<td>Battery polarity is reversed or the battery</td>
</tr>
<tr>
<td></td>
<td>circuit is open.</td>
</tr>
</tbody>
</table>

Table 3-1: LED Definitions

Do not allow metal objects (e.g., screws, cutlery, nails) to come in contact with the battery contacts.

Use only the provided charger to charge the batteries. Using any other charger will void the warranty.

Use only the batteries provided. Using any other battery will void the warranty.

Use Uponor-recommended charging procedures. Incorrect use leads to short circuits, overheating or battery fluid leakage.

To prolong the battery’s life, avoid overcharging. Do not charge for more than two days.

Replace the battery if there is a substantially reduced operating time after proper charging.

This symbol, located on the underside of the battery pack, signifies the battery needs to be disposed of properly in accordance with local environmental regulations. Do not incinerate the battery or dispose of the battery in common waste-removal containers.
6. Service the tool annually to ensure proper function and extend the life of the tool. Uponor offers the Tool Depot for service, repair or warranty work. For more information on the Tool Depot, refer to the Repairs section on page 10.

**Note:** Failure to properly lubricate the tool may result in tool damage or improper connections.

**Caution:** Excessive lubrication may result in improper connections. Only use a small amount of lubricant to keep the tool working properly.

### Troubleshooting

If you experience difficulty making connections, follow the steps below.

1. Ensure the battery is fully charged.
2. Do not overload the tool’s capacity. After approximately 50 completed cycles, allow the tool to cool down for 15 minutes before continuing operation.
3. Check if the tool needs lubrication on moving parts. Lubricate with a high-grade, light oil.

Refer to the following table for instructions about troubleshooting the Mini-Press Battery Tool.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool does not start</td>
<td>Dead or defective battery</td>
<td>Replace with new, fully charged battery.</td>
</tr>
<tr>
<td></td>
<td>Corroded battery contacts</td>
<td>Replace with new, fully charged battery.</td>
</tr>
<tr>
<td></td>
<td>Defective trigger switch</td>
<td>Return the tool to the Tool Depot.</td>
</tr>
<tr>
<td></td>
<td>Defective tool motor</td>
<td>Return the tool to the Tool Depot.</td>
</tr>
<tr>
<td>Press jaws do not close completely</td>
<td>Low battery charge or defective battery</td>
<td>Ensure battery is fully charged or replace with a new, fully charged battery.</td>
</tr>
<tr>
<td></td>
<td>Defective drive unit</td>
<td>Return the tool to the Tool Depot.</td>
</tr>
<tr>
<td></td>
<td>Incorrect press jaw used for the fitting size</td>
<td>Ensure the press jaw size matches the tubing size.</td>
</tr>
</tbody>
</table>

**Table 4-1: Troubleshooting Table**
Safety Guidelines
To reduce the risk of electric shock, personal injury and fire, always follow basic safety precautions. Read and comply with all these guidelines before operating the Mini-Press Battery Tool. Failure to do so can result in tool damage or failure.
- Always start the tool with a press jaw on it.
- Keep fingers and hands away from the moving areas.
- Remove the battery when the tool is not in use, before servicing and when changing press jaws.
- Do not operate or expose the tool, press jaws, battery or charger to moisture, combustible fluids or gases (danger of explosion).
- Do not use the tool for any function other than installing MLC press fittings.
- Always wear protective eyewear and clothing when operating the tool.
- Use original Uponor replacement parts only.
- Keep this tool away from children. Only professional contractors should operate the Mini-Press Battery Tool.
- Keep the tool and all its accessories clean and dry. Dirt and rust will hinder proper and safe tool operation.

Important: The Mini-Press Battery Tool complies with relevant safety regulations. To avoid injuries, all maintenance and repair work, particularly when involving electrical systems, should only be performed by an authorized expert or trained personnel using genuine Uponor parts. All unauthorized modifications to the equipment are prohibited for safety reasons and will void the warranty.

Repairs
Send all repairs to the Uponor Tool Depot. The Tool Depot is a convenient way to repair or replace tools quickly and easily. For more information, contact Uponor Technical Services toll-free at (800) 321-4739 or go to www.uponor-usa.com, and click on Online Services.

For access to the Tool Depot, use the following login names.
Username — tool
Password — depot

First-time users must complete a registration form. Please note that contractors with existing accounts do not need to re-register.

Warranty
The Mini-Press Battery Tool comes with a one-year warranty from the date of delivery (verified by invoice or delivery note). Damage caused by normal wear and tear, overloading or improper handling are excluded from the warranty.

Send all warranty repairs to the Tool Depot (refer to Repairs section on page 10). Note that warranty claims are only accepted if the complete tool with all hardware, parts and accessories are returned to the Tool Depot.

Note: Failure to read and comply with operation and maintenance instructions in this manual voids the warranty.
Section 5
Making MLC Press Fitting Connections

Installation Guidelines
Prior to installing Uponor MLC Press Fittings, refer to the following guidelines.

1. Thoroughly read the following instructions before installing Uponor MLC Press Fittings. These instructions are for licensed contractors who are Uponor-trained to use MLC Press Fittings and associated installation tools.

2. Uponor MLC Press Fittings are compatible only with Uponor MLC tubing. Do not use Uponor MLC Press Fittings on any other PEX tubing product.

3. Do not use other PEX tubing fittings on Uponor MLC tubing. PEX fittings are not compatible with Uponor MLC tubing.

4. Only use MLC tubing and MLC Press Fittings in radiant heating applications.

Tools Needed
- Mini-Press Battery Tool
- Tubing cutter designed for MLC tubing
- Properly sized press jaws
- MLC tubing chamfering tool

Preparing the MLC Tubing
Refer to the following instructions to prepare the MLC tubing for the press fitting.

1. Square cut the tubing perpendicular to the length of the tubing using the appropriate Uponor tubing cutter (see Figure 5-1).

2. After cutting the tubing, use the appropriate chamfering tool on the tubing end. Use either the Uponor MLC Tubing Three-way Chamfering Tool for 3/8", 1/2" and 3/4" Uponor MLC tubing or use individual T-handled Chamfering Tools for 3/8", 1/2" and 3/4" Uponor MLC tubing (see Figure 5-2).
3. Chamfer the tubing end until uniform.
4. Remove the tool and clean any shavings from the chamfered end.

**Installing the MLC Press Fitting**

Refer to the following instructions to make the press fitting.

1. Insert the tubing end into the MLC Press Fitting until the tubing is visible through the witness holes on the stainless steel sleeve (see Figure 5-3). (Take care not to damage the o-rings.)
2. Ensure the proper size press jaws are on the tool.
3. Manually push the press jaws together at the base near the tool body until the jaws are positioned over the press fitting.
4. Release the pressure on the press head so the jaws close down around the fitting.
5. Position the jaws equal distance from each end of the fitting's stainless steel sleeve.
6. Engage the trigger to close the jaws over the fitting (see Figure 5-4).
7. Hold the trigger until the cycle is complete.
8. Release the trigger and the jaws will automatically release from the completed fitting.

**Installing MLC Sweat Fittings**

Refer to the following instructions to install MLC Sweat Fittings (when applicable).

1. If not already disassembled, remove the two o-rings from the fitting prior to sweating.
2. After the sweating, allow the fitting to cool down to room temperature.
3. Reinstall the o-rings in their proper position on the fitting.
4. Position the large o-ring in the groove next to the shoulder of the fitting. Position the smaller o-ring in the groove midway along the fitting (see Figure 5-5).
5. Slide the stainless steel sleeve over the fitting until it snaps into place. Ensure the witness holes are positioned toward the shoulder of the fitting and not the end.
6. Complete the fitting installation as described above.

**Inspection and Pressure Testing**

Refer to the following instructions to inspect and pressure test a system after installing MLC Press Fittings.

1. Visibly inspect all fittings for completeness prior to pressurizing the system.
2. Pressurize the hydronic system in accordance with local code requirements.
3. In the absence of code requirements, pressurize the system with air to 60 psi for at least 24 hours prior to embedding tubing in concrete.
4. Keep the system under pressure until construction around the tubing system is complete. This ensures system integrity throughout the construction phase.