

# Ford Meter Box<sup>®</sup> Product Installation Manual

Corporation Stops, Ball Valves, Key Valves, Check Valves  
and Ford Compression Fittings

**WARNING:** Do not use on gas lines. Installation on gas lines can result in serious injury or death.

Before installing, read precautions on page 2, all applicable instructions and Warranty on back cover.

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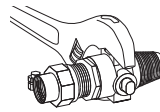
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DO NOT USE A  
PIPE WRENCH



USE A SMOOTH  
WRENCH AND FULLY  
ENGAGE MAIN BODY  
WRENCH FLATS



RECOMMENDED  
WRENCH

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## INSTALLATION INSTRUCTIONS

**IMPORTANT NOTICE - READ INSTRUCTIONS AND WARRANTY CAREFULLY BEFORE INSTALLATION**

Refer to the Ford<sup>®</sup> website ([www.fordmeterbox.com](http://www.fordmeterbox.com)) for additional and most recent installation instructions and product information.

### PRECAUTIONS

**WARNING:** Do not use on gas lines. Installation on gas lines can result in serious injury or death.

1. Do not use a pipe wrench (See illustrations on page 1).
2. Brass fittings can be damaged by improper handling. Protect threads. Avoid loose fitting wrenches. Do not drop. Backfill and compact carefully so the fittings and tubing/pipe are not stressed by the weight of the earth.
3. If you are unfamiliar with Ford connections, a little practice and testing in the shop before going on the job is time well spent.
4. Use Ford solid tubular metal insert stiffeners with any plastic pipe likely to distort under pressure.
5. For best results, minimize tubing/pipe deflection at each connection and make sure each connection and clamp screw is properly tightened.
6. **Inspect and test all joints, valves, and fittings for leaks before backfilling. Making repairs after backfilling is costly.** If this is impossible and when several are involved, be sure to test sections of the system as job progresses instead of waiting until all services are completed.
7. Use extra care with higher water pressures (over 100 psi) and with pipe/tubing over 1" nominal diameter.
8. Consult pipe or tubing manufacturer for specific installation requirements.

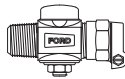
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**Warning and Precautions**

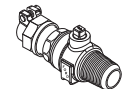
**Please read before installing**



Before installing, please read [Precautions](#) and [Warranty](#)

Key  
Style

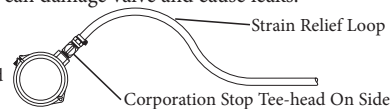
## FORD® CORPORATION STOP INSTALLATION INSTRUCTIONS

Ball  
Style

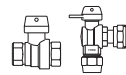
### INSTRUCTIONS AND PRECAUTIONS

1. Handle carefully. Protect threads. Keep valve free from dirt, sand, pipe chips. Do not drop or throw valve. **Do not use a pipe wrench.** (See illustrations on page 1.) Protect valve from freezing.
2. Use a suitable sealant or three rounds of PTFE tape on inlet threads.
3. Ford offers Pack Joint, Grip Joint, Quick Joint and Ultra-Tite style compression service line connections. **Make sure to read and follow the proper (A, B, C or D) instructions that match the compression style connection supplied.** See pages 9-13 for the applicable instructions.
4. **Consult pipe or tubing manufacturer for specific installation requirements.**
5. Use only smooth-jawed, adjustable wrenches that fully and evenly engage the product wrench flats and not on round surfaces. Loose fitting wrenches and pipe wrenches will distort the valve and cause leaks.
6. Place wrench only on wrench flats provided on valve body, not on round surfaces. Never use tapping machine to complete tightening into water main. Use 2 wrenches when connecting the service line, one to secure the corporation stop and one to tighten the connection.
7. Install Corporation Stop with tee-head positioned on side as illustrated below.
8. All Ford Key Corporation Stops are factory tested and pressure rated for 100 psi (working and test) per AWWA C800. Use Ballcorp Corporation Stops for higher pressures.
9. **Pressure test for leaks before backfilling. Making repairs after backfilling is costly.**
10. Backfill and compact carefully under and around corporation, connection and service line to prevent ground shifts, which could damage the valve, saddle, and/or service connection.
11. Protect valve from freezing. Freezing can damage valve and cause leaks.

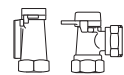
Recommended Saddle, Corp Stop and  
Service Line Installation



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## FORD® BALL VALVE, KEY VALVE AND Z VALVE INSTALLATION INSTRUCTIONS



### INSTRUCTIONS AND PRECAUTIONS

1. Handle the valve carefully to avoid damage to threads, sealing surfaces and moving parts. Keep valve free of dirt, sand, pipe chips, PTFE tape or sealants. Protect the valve from freezing or serious damage may result. Do not forcibly open or close a valve if frozen. Do not drop or throw valve. Valves open counter-clockwise. **Do not use a pipe wrench. Loose fitting wrenches and pipe wrenches will distort the valve and cause leaks.** (See illustrations on page 1.)
2. Use caution when tightening threaded connections. Use a suitable sealant or three rounds of PTFE tape on tapered pipe threads. Tighten the valve with a close-fitting smooth-jawed wrench only on the body flats provided and not on round surfaces. The use of a pipe wrench or wrenching on surfaces other than the flats may result in body distortion and valve leakage not covered by warranty. **DO NOT INSERT A SCREWDRIVER OR OTHER OBJECT INTO THE VALVE TO TIGHTEN - DAMAGE WILL RESULT.**
3. Ford offers Pack Joint, Grip Joint, Quick Joint and Ultra-Tite style compression service line connections. **Make sure to read and follow the proper (A, B, C or D) instructions that match the compression connection supplied.** See pages 9-13 for the applicable instructions.
4. **Consult pipe or tubing manufacturer for specific installation requirements.**
5. **Pressure test the service line and ball valve before backfilling. Making repairs after backfilling is costly. Inspect all valves, fittings, joints, and pipe. Test valves for proper operation.**
6. Backfill and compact carefully under and around all components to avoid damage or stress to the curb box, valve, connections or service line. Always keep curb box properly supported to prevent damage to curb stop.
7. When possible, flush out the service line and valve following installation.
8. All Ford Key Valves, including Z valves, are factory tested and pressure rated to 100 psi (working and test) for 3/4" and 1", and 80 psi for 1-1/4" - 2" per AWWA C800. Use Ball Valves for higher pressures. Flange inverted angle key valves (FV) should not be used as a customer shut-off on the outlet side of the meter.
9. Key Valves are not designed for frequent operation. If the valve leaks, open and close to assist in reseating the key. For frequent operation, a Ball Valve is recommended.
10. All Ford valves, including those with stop & waste features must be operated in either the fully opened or the fully closed position. Z valve bodies have an arrow pointing in the correct flow direction.
11. See page 6 for Secura-Lok operation instructions. See page 5 for Stop and Waste overview.

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## FORD® STOP & WASTE BALL VALVES INSTALLATION INSTRUCTIONS



### INSTRUCTIONS AND PRECAUTIONS

1. During installation note the flow direction indicated on the valve. The drain hole is located on the outlet side of the valve. Incorrect flow direction will cause the valve to leak constantly in the closed position.
2. If valve is to be buried, backfill with "pea" gravel around valve to keep drain hole unobstructed.
3. Handle the valve carefully to avoid damage to threads, sealing surfaces and moving parts. Keep valve free of dirt, sand, pipe chips, PTFE tape or sealants. Protect the valve from freezing or serious damage may result. Do not forcibly open or close a valve if frozen. Do not drop or throw valve. Valves open counter-clockwise. **Do not use a pipe wrench. Loose fitting wrenches and pipe wrenches will distort the valve and cause leaks.** (See illustrations on page 1.)
4. Use caution when tightening threaded connections. Use a suitable sealant or three rounds of PTFE tape on tapered pipe threads. Tighten the valve with a close-fitting smooth-jawed wrench only on the body flats provided and not on round surfaces. The use of a pipe wrench or wrenching on surfaces other than the flats may result in body distortion and valve leakage not covered by warranty.
5. Ford offers Pack Joint, Grip Joint, Quick Joint and Ultra-Tite style compression service line connections. **Make sure to read and follow the proper (A, B, C or D) instructions that match the compression connection supplied.** See pages 9-13 for the applicable instructions.
6. **Consult pipe or tubing manufacturer for specific installation requirements.**
7. **Pressure test the service line and ball valve before backfilling. Making repairs after backfilling is costly. Inspect all valves, fittings, joints, and pipe. Test valves for proper operation.**
8. Backfill and compact carefully under and around all components to avoid damage or stress to the curb box, valve, connections or service line.
9. When possible, flush out the service line and valve following installation.
10. To ensure proper valve performance the valve must be in Full Open or Full Closed position.
11. Stop and Waste Ball Valves are designed to withstand pressures up to 150 psi.

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Before installing, please read [Precautions](#) and [Warranty](#)

## FORD® SECURA-LOK LOCKING OPERATION INSTRUCTIONS

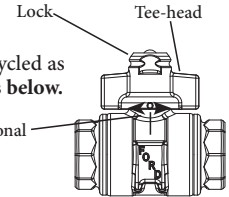
Product is shipped/received in the unlocked open position and can be operated/cycled as a normal valve without a key (sold separately). **Before operation, see precautions below.**

### Steps for operation:

*To lock valve, open or closed (see below to unlock):*

1. Rotate Tee-head to desired position: open vs closed.
2. Insert key (sold separately) into lock and remove lock from Tee-head.
3. Lift and rotate Tee-head 180 degrees into locking position without cycling/operating the valve. Make sure the Tee-head is fully seated.
4. Reposition lock onto Tee-head and make sure the lock is properly engaged.
5. Tee-head is now locked.

Normal operational position



*To unlock valve:*

1. Insert key (sold separately) into lock and remove lock from Tee-head.
2. Lift Tee-head and rotate 180 degrees into operating position. Make sure the Tee-head is fully seated.
3. Before turning to desired position, replace lock onto Tee-head.
4. Tee-head is now un-locked to open or close the valve.

### Precautions:

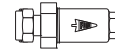
1. **Do not operate/cycle the valve without fully engaging the lock.**
2. Keep the lock, Tee-head and the top of the valve body free from debris that could hinder proper operation.
3. Forcing valve operation when it is in a locked position will damage the valve. Opening and closing the valves require less than 10 ft-lb.

See the regular Ball Valve installations instructions (page 4) for additional information and precautions.

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## FORD® CHECK VALVE INSTALLATION INSTRUCTIONS



Most Ford Check Valves, angle and straight, are designed for installation on the outlet side of a water meter. The integral meter coupling nut (or flange) attaches to the meter and serves as a union fitting for easy removal of the check from the service line for inspection and maintenance.

### INSTRUCTIONS AND PRECAUTIONS

1. Thoroughly flush the service line. It is recommended a strainer be installed upstream of the check valve and meter installation. Any foreign particle may foul internal check valve components.
2. Be careful when using thread sealants during installation; sealants may damage the internal parts of any check valve. Do not drop or throw valve.
3. Ford offers Pack Joint, Grip Joint, Quick Joint and Ultra-Tite style compression service line connections. **Make sure to read and follow the proper (A, B, C or D) instructions that match the compression style service line connection supplied. See pages 9-13 for applicable instructions.**
4. **Do not use a pipe wrench.** Use only smooth-jawed, adjustable wrenches that fully engage the product wrench flats and not on round surfaces. **Loose fitting wrenches and pipe wrenches will distort the valve and cause leaks. (See illustrations on page 1.)**
5. Make sure the direction of flow arrow on the check valve matches the water flow direction in the system. Place wrench only on flats provided. Wrench placement at any other location could damage the check valve.
6. Install the check valve in an accessible location with ample clearance so inspection and maintenance of the valve can be easily accomplished.

**Note:** Check valves are mechanical devices subject to fouling, wear and mineral deposits. Inspection and maintenance are critical for continued operation. Repair kits are available and listed in the Ford Meter Box Product Catalog.

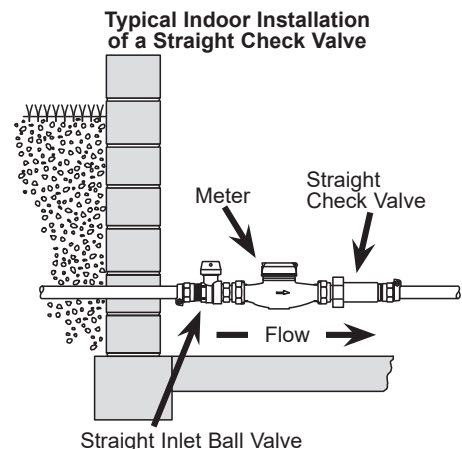
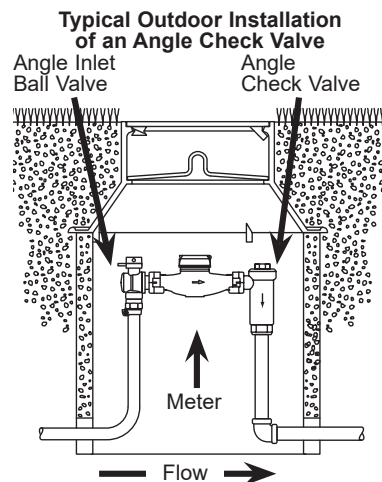
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7. Install the check valve in an area safe from freezing.

**Caution:** Thermal water expansion in the water heater can cause excessive pressure to build within a closed system (when a check valve is installed). Appropriate pressure relief valves or expansion tank systems should be installed at or near the water heater.

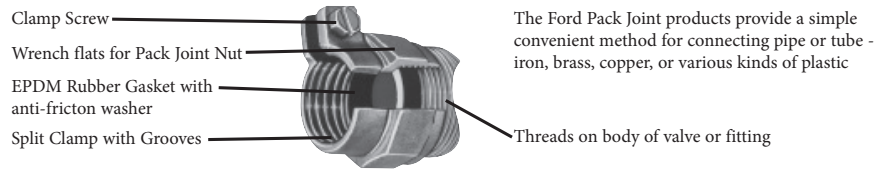
8. Consult pipe or tubing manufacturer for specific installation requirements.



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Before installing, please read [Precautions](#) and [Warranty](#)

## A. FORD® PACK JOINT CONNECTION INSTRUCTIONS



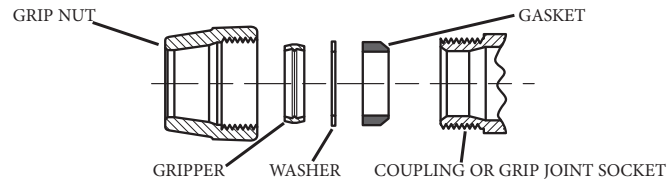
The Ford Pack Joint products provide a simple convenient method for connecting pipe or tube - iron, brass, copper, or various kinds of plastic

### Steps for Installation

1. Make sure pipe/tubing is round. On copper tubing, use a rounding tool. Remove burrs. Clean or scrape off any dirt or corrosion so the surface is smooth.
2. When using plastic pipe or tubing, install proper size solid Ford tubular metal insert stiffener in the pipe/tubing.
3. After selecting the proper size Pack Joint fitting, loosen the Pack Joint nut and insert the tubing so the end of the tubing is well past the rubber seal gasket.
4. Tighten Pack Joint nut 1 to 1-1/2 rotations after gasket starts to compress. Do not use a pipe wrench. If clamp screw is not accessible, reposition by further tightening Pack Joint nut.
5. To ensure against blowout of pipe, tighten the clamp screw very securely. A socket or box end wrench is preferable to a screwdriver. Avoid overtightening. Clamp ends are not designed to touch.
6. **Pressure test for leaks before backfilling.**
7. Backfill under and around the fitting, connection and service line to prevent ground shifts and leakage.
8. **Consult pipe or tubing manufacturer for specific installation requirements.**

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## B. FORD® GRIP JOINT CONNECTION INSTRUCTIONS

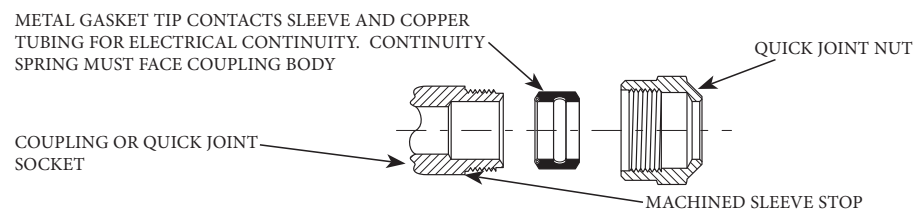


### Steps for Installation

1. Make sure pipe/tubing is round. On copper tubing, use a rounding tool. Remove burrs. Clean or scrape off any dirt or corrosion so the surface is smooth.
2. When using plastic pipe or tubing, install proper size solid, Ford tubular metal insert stiffener in the pipe/tubing.
3. After selecting the proper size Grip Joint fitting, loosen the grip nut and insert tubing into the nut through the grip ring and gasket. The tubing should be inserted into the fitting so the end of tubing is well past the rubber seal gasket and at least 1/8" from the bottom of the socket. (The grip nut can also be disassembled from the fitting as long as the internal parts are kept in the order shown in the diagram above.)
4. For best results, hold the body of the Grip Joint fitting stationary against a stable surface with a smooth-jawed wrench while tightening the nut to prevent body rotation/movement. Tighten the nut 1-1/2 to 2-1/2 rotations past hand tight. **Do not use a pipe wrench.**
5. **Pressure test for leaks before backfilling.**
6. Backfill under and around the fitting, connection and service line to prevent ground shifts and leakage.
7. **Consult pipe or tubing manufacturer for specific installation requirements.**

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## C. FORD® QUICK JOINT CONNECTION INSTRUCTIONS



### Steps for Installation

1. Make sure pipe/tubing is round. On copper tubing, use a rounding tool if necessary. Remove burrs. Clean or scrape off any dirt or corrosion so the surface is smooth.
2. Use proper size Ford solid tubular metal insert stiffeners with any plastic pipe that is likely to distort or cold flow under pressure of the Quick Joint rubber or gripper.
3. The tubing should be inserted into the fitting so the end of the tubing is well past the rubber seal gasket and at least 1/8" from the bottom of the socket.
4. Tighten Quick Joint nut until it contacts the machined sleeve stop. **Do not use a pipe wrench.**
5. **Pressure test for leaks before backfilling.**
6. Backfill under and around the fitting, connection and service line to prevent ground shifts and leakage.
7. **Consult pipe or tubing manufacturer for specific installation requirements.**

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Before installing, please read [Precautions](#) and [Warranty](#)

### D. FORD® ULTRA-TITE CONNECTION INSTRUCTIONS



#### Steps for Installation

1. Handle fittings carefully before and during installation. Protect threads. Do not drop or throw the fitting. Keep fitting clean and free from dirt, sand, chips, etc. Foreign materials can interfere with proper service line restraint and seal.
2. **DO NOT USE ON METALLIC OR PVC PIPE/TUBING.** Ultra-Tite fittings are for use on certain PE and PEX pipe or tubing only. Make sure the PE or PEX pipe or tubing is compatible with the Ultra-Tite fitting being installed. Each fitting is specifically designed to fit either SDR7 PE pipe (IPS) or SDR9 (CTS) PE and PEX tubing. Do not use an insert with PE pipe and PE tubing. PEX tubing and pipe must meet ASTM F876 and AWWA C904 requirements and PEX must be installed with Ford Meter Box Inserts.
3. Use caution when tightening all threaded connections. Use a suitable sealant or three rounds of PTFE tape on pipe threads. Use a smooth-jawed, closely-fitting wrench on the wrench flats. **Do not use a pipe wrench.** A pipe wrench across the round portion of the fitting can distort the body and prevent proper service line restraint and seal. A pipe wrench can also distort the body under wrench flats.
4. Important: Cut pipe/tubing with a tube cutter to ensure a square cut. Properly bevel the end of pipe or tubing before making the connection to assist insertion and prevent o-ring damage. Use of a chamfer tool is highly recommended. Make sure the pipe/tubing is clean, round and not nicked or cut. Do not use lubricant or sealant. Do not use an insert.

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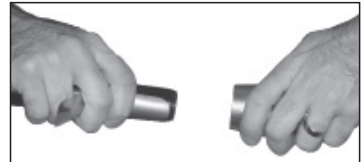
#### Continued from previous page Ford® Ultra-Tite

5. Align the pipe/tubing with the fitting and push the pipe/tubing straight into the fitting, well into the socket to ensure a complete and well-supported connection. A deflected insertion can cause the pipe end to interfere with the internal components and prevent a proper connection. Make sure pipe/tubing remains snaked with plenty of slack between connections.
6. **Pressure test for leaks before backfilling.**
7. **Consult pipe or tubing manufacturer for specific installation requirements.**
8. Backfill and compact carefully under and around the fitting, connection and service line to prevent ground shifts and leakage.

#### REMOVAL:

A removal tool (UTRT-520200) is required to disconnect the pipe/ tubing from the Ultra-Tite fitting.

1. Slide the tool between the pipe/tubing and the fitting to relieve gripper engagement. (Two removal tools are required for 1" fittings.) Pull pipe from fitting.
2. **Discard the used gripper (do not reuse) and replace with new gripper. Insert larger gripper diameter first. Replace o-ring if damaged.**



#### WARRANTY - READ BEFORE INSTALLING

All merchandise is warranted to be free from defects in material and factory workmanship for one year from date of shipment from our factory. We will provide, free of charge, new products in equal quantities for any that prove defective within one year from date of shipment from our factory. Manufacturer shall not be liable for any loss, damage, or injury, direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for user's intended use and user assumes all risk and liability whatever in connection therewith. No claims for labor or consequential damage will be allowed. The foregoing may not be changed except by agreement signed by an officer of the Manufacturer.

No other warranties are applicable or may be implied, including the implied warranty of merchantability and the implied warranty of fitness for particular purpose and any warranty relating to infringement or the like, all of which are disclaimed.

**DAMAGE CAUSED BY IMPROPER TOOLS OR HANDLING  
WILL VOID OUR WARRANTY**



**WARNING: Do not use on gas lines. Installation on gas lines can result in serious injury or death.**

Warranty and Warning

Please read before installing

