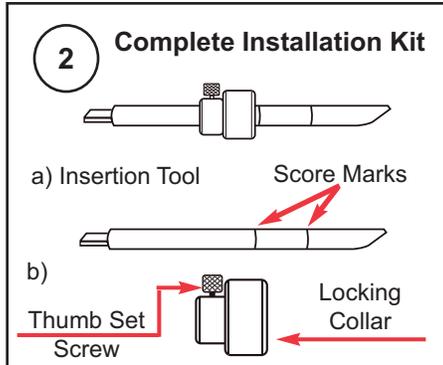
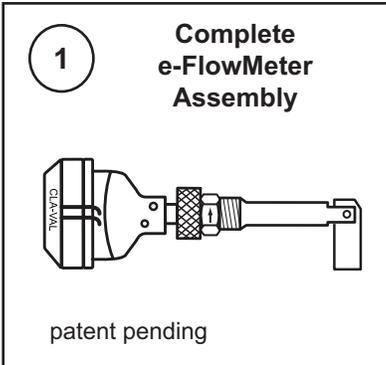




X144D e-FlowMeter

Quick Start Installation & Removal Instructions

X144D e-FlowMeter Included Hardware



Parts List

- 1) X144D e-FlowMeter Assembly with 30 foot cable
- 2) Installation Kit containing:
 - a) Insertion Tool
 - b) Locking Collar with Thumb Set Screw (a and b come assembled)

Installation Kit Part Numbers:

Small (2.5" - 6" + 8" reduced Port): 208450-21K
Large (8" Full Port - 16") : 208450-20A

Step-By-Step X144D e-FlowMeter Installation Instructions

Step 1: Take necessary safety precautions

- Isolate the control valve using main line isolation valves
- Bleed pressure from valve before removing body plug
- Remove an inlet body plug

NOTE: If both inlet body tappings are used for the pilot system, consult factory for correct modification instructions.

Step 2A:
Loosen Knurled Lock Nut on e-FlowMeter Assembly

Step 2B: Pull apart. Straighten Measurement Cylinder by hand. Set aside Sensor/Head in safe location, protecting sensor tip

Step 3A: Screw Locking Collar on straight threads. Insert angled end of provided tool as shown, until it stops

Step 3B: Tighten Thumb Set Screw

Step 4: Apply Teflon® tape to NPT Threads

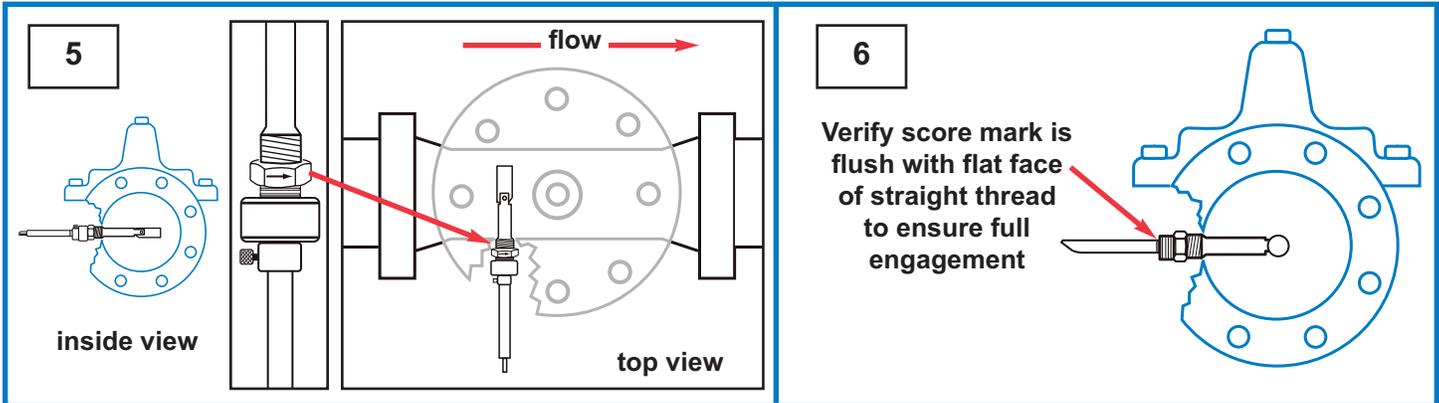
- Check threads on valve
- Use thread chasing tool (not supplied), if necessary



X144D e-FlowMeter

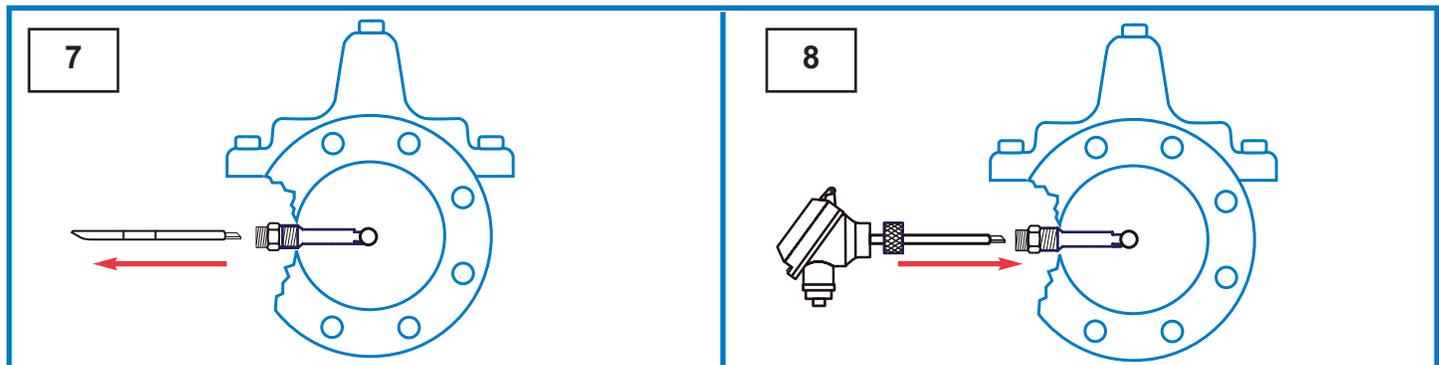
Quick Start Installation & Removal Instructions

Step-By-Step X144D e-FlowMeter Installation Instructions (continued)



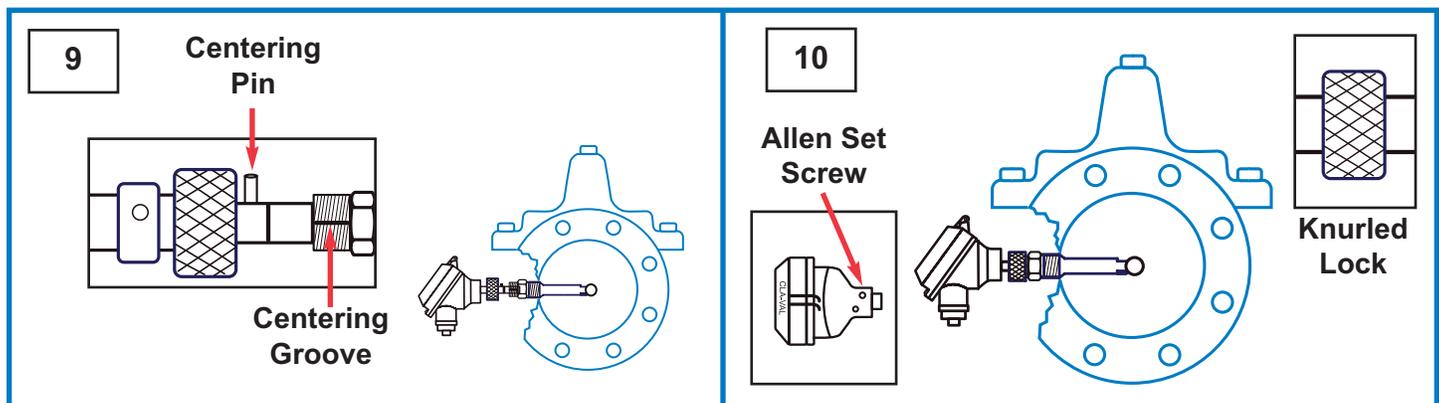
Step 5: Insert straightened Swivel Insert/Measurement Cylinder Assembly into valve, orient arrow on wrench flat to point downstream

Step 6: Loosen Thumb Set Screw. Remove Locking Collar from tool. Remove tool and re-insert opposite end into Swivel Assembly. Engage the tool and push firmly to orient Measurement Cylinder 90° into flow path



Step 7: Remove tool from Threaded Swivel Insert

Step 8: Insert tip of e-FlowMeter Sensor/Head Assembly into Threaded Swivel Insert



Step 9: Line-Up Centering Groove on straight threads with Centering Pin; push to seat o-ring

Step 10: **HAND TIGHTEN** Knurled Lock onto straight threads. Tighten Allen Set Screw with M3 Allen Wrench to lock Sensor Head Assembly.

Proceed in accordance with Wiring Diagram

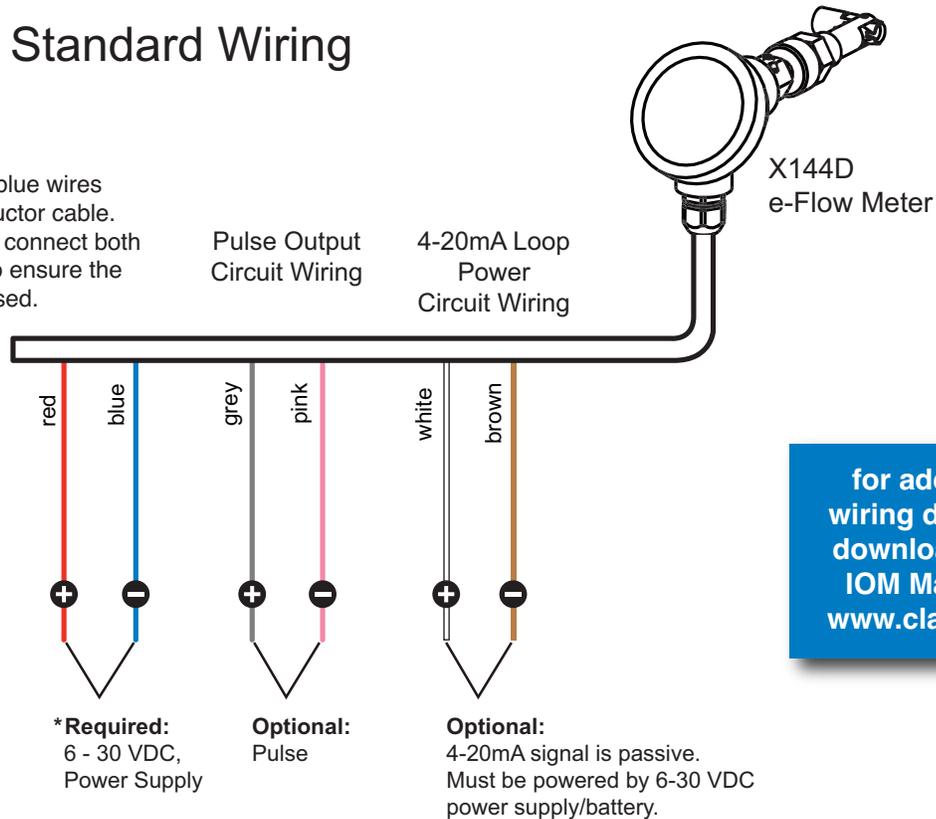


X144D e-FlowMeter

Quick Start Installation & Removal Instructions

Standard Wiring

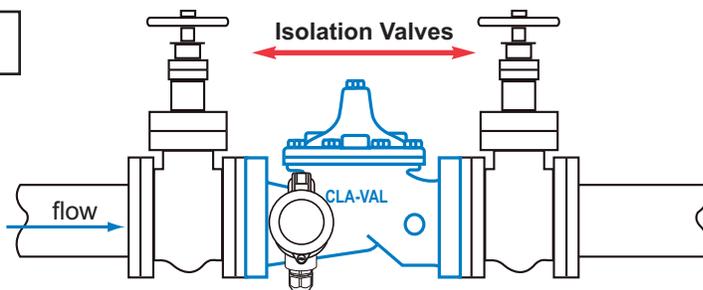
***Note:** There are two blue wires within the multi-conductor cable. It is recommended to connect both blue wires together to ensure the correct blue wire is used.



for additional wiring diagrams, download N-144 IOM Manual at www.cla-val.com

Step-By-Step X144D e-FlowMeter Removal Instructions

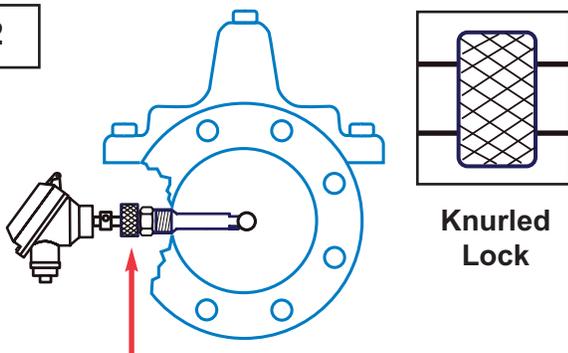
1



Step 1: Take necessary safety precautions

- Isolate the control valve using main line isolation valves
- Bleed pressure from valve before removing the e-FlowMeter
- Disconnect power to all electronic devices on valve, including e-FlowMeter

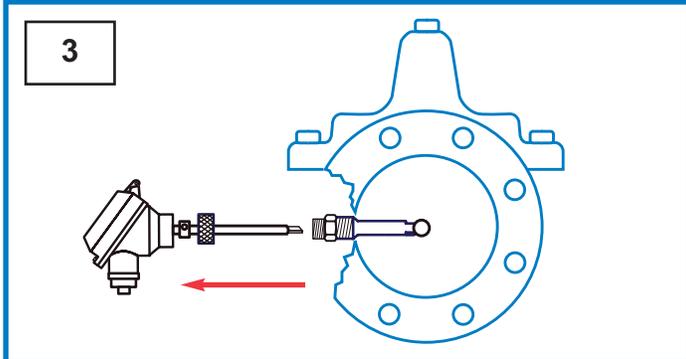
2



Step 2: After isolating the valve, bleeding pressure and disconnecting electronic devices, hand loosen the Knurled Lock from straight threads

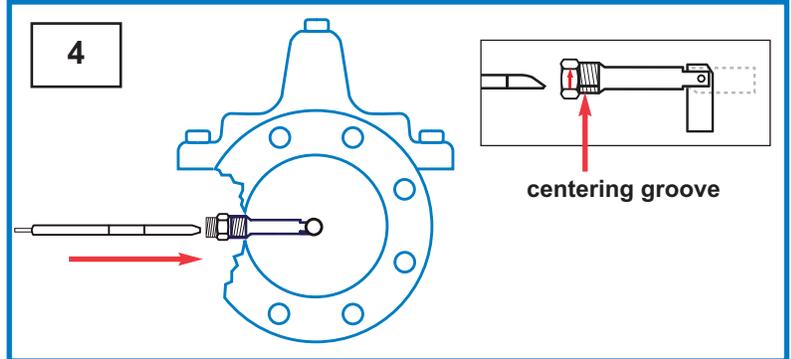
call 800.942.6326 for assistance or log-on to www.cla-val.com for more information

Step-By-Step X144D e-FlowMeter Removal Instructions (continued)



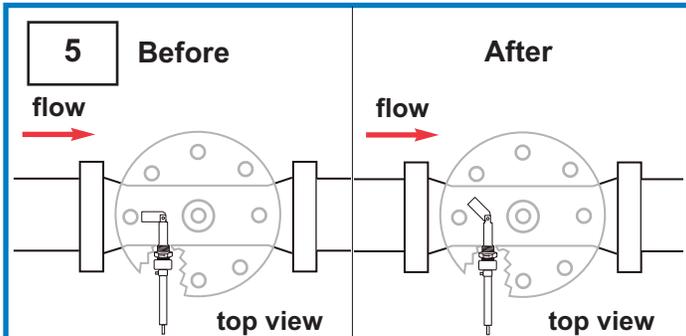
Step 3:

- Remove the e-FlowMeter Sensor/Head Assembly by pulling straight outward, being careful not to hit the sensor tip on the Threaded Swivel Insert tube
- Set Sensor/Head Assembly aside, taking care to protect the sensor tip



Step 4:

- Orient the Installation Tool so that the bevel is facing downstream, away from the centering groove as shown in detail drawing, and insert into the Threaded Swivel Insert



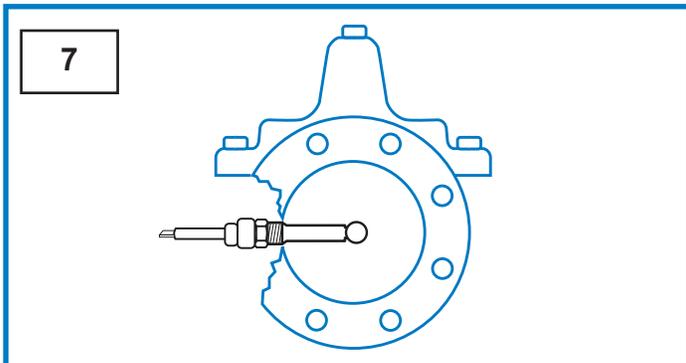
Step 5:

- Once inserted into the Threaded Swivel Insert tube, the Installation Tool will engage the top face of the Measurement Cylinder and force it to the 45° position, as shown above



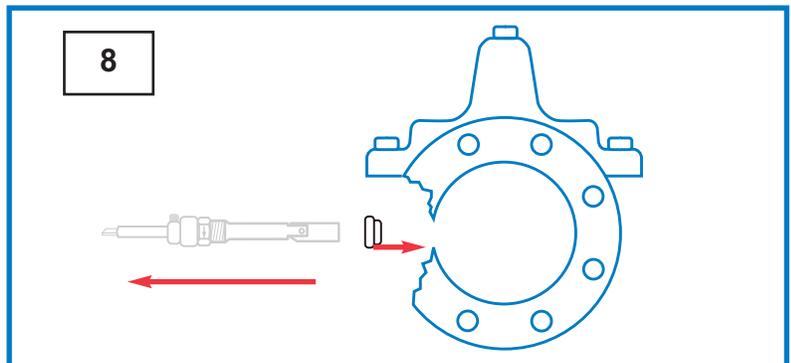
Step 6:

- Slide Installation Tool straight out, then rotate 180° so that the bevel is facing upstream of the valve, which is now facing the same direction of the centering groove, see above
- The lip of the Installation Tool will engage the inside of the Measurement Cylinder as shown in photo



Step 7:

- Once engaged, use light force to straighten the measurement cylinder, and then secure the Installation Tool in place with Locking Collar in locked position



Step 8:

- Remove Threaded Swivel Insert from the valve tapping with the Measurement Cylinder straightened
- Insert body plug into tapping while servicing the e-FlowMeter