

# Register Extension INSTALLATION OPERATION & MAINTENANCE **MANUAL**

*Issue Date:*  
November 2003



*MA146 (for FM102/182)  
MA147 (for Masterflo)  
MA153 (for FM103/183)  
MA160 (for FM104/184)*

# SPARLING

# 1.0

## Unpacking & Inspection

- 1.1 Locate the packing slip shipped with your unit, this will list all the items sent with the shipment. Compare packing slip to order acknowledgment you received previously and verify that all items correspond.
- 1.2 If all items correspond, examine the shipping containers for unusual denting and/or damage. If shipping containers are in good condition, begin unpacking. Do a general examination of each part as it is removed from its packaging, checking for any obvious signs of physical damage.
- 1.3 If there is no apparent damage to the items you may begin the installation procedure in SECTION 2.
- 1.4 If any item shows damage due to shipment call the Customer Service Department immediately, at (626) 444-0571 you will then be advised of the measures to take.
- 1.5 If you find items are missing from your shipment, contact the Sparling Customer Service Department immediately, at (626) 444-0571. They will verify the order and trace any missing item for you.

# 2.0

## Installation

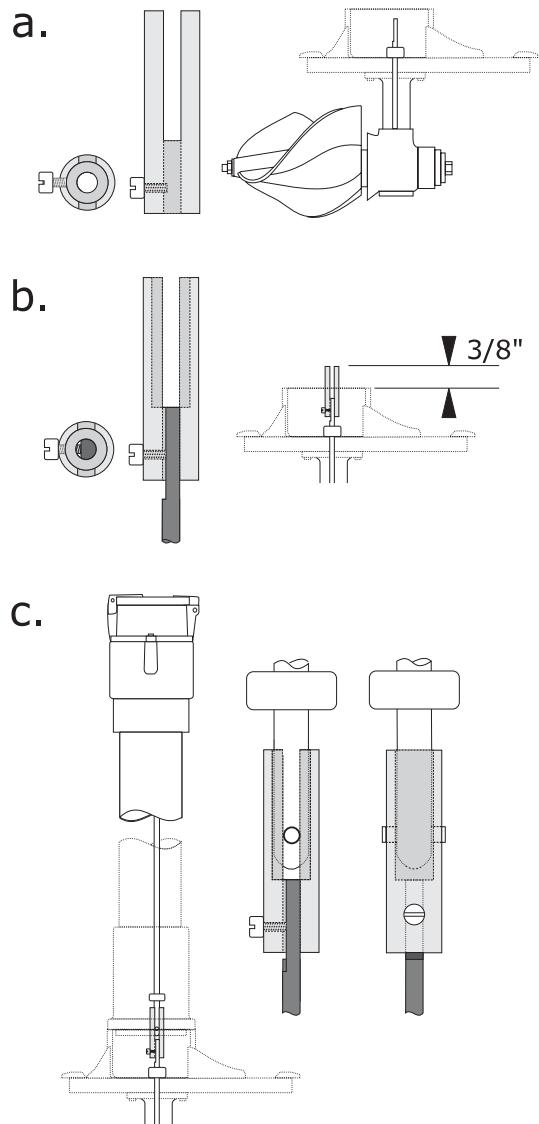
### 2.1 Installation Concerns

The register extension may be attached to the meterhead before or after it is placed in the process line. If it is installed when the meter is in line, the process fluid MUST NOT BE FLOWING. If fluid is moving through the line, the propeller and propeller shaft will be rotating, making proper alignment difficult and damage to the vertical shaft possible. DO NOT VOID YOUR WARRANTY. INSURE THAT PROCESS FLUID IS NOT MOVING THROUGH PIPE WHILE INSTALLING REGISTER EXTENSION.

### 2.2 Installation Procedure

MA146 (FM102/182); MA147 (Masterflo); MA153 (FM103/183)

- a. The register extension is supplied with a clevis, one clevis screw and two register box screws.
- b. Mount the clevis to the meterhead vertical shaft so that 3/8" of the clevis extends past the top edge of the meterhead. Tighten clevis screw till snug.
- c. Slip register extension vertical shaft into the top of the clevis. Rotate the register extension (if necessary) until the bolt holes on it and the meterhead are aligned. Attach securely with two register box screws.

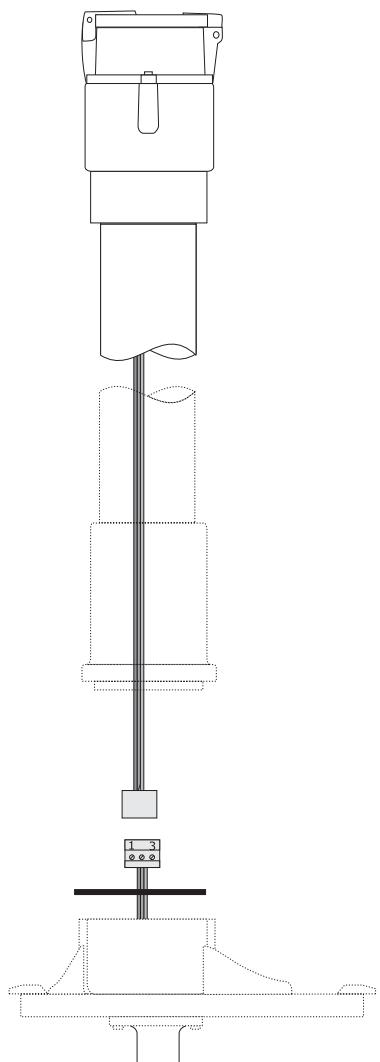


# 2.0

## Installation

### 2.3 Installation Procedure MA160(FM104/184)

- a. The register extension is supplied with a three-wire cable, a gasket and two register box screws.
- b. Place gasket on meterhead register box. Fit the three-wire connector into the socket on the cable extending from the register extension
- c. Fit register extension to meterhead, aligning the bolt holes and gasket. Insert and tighten the register box screws until snug and then tighten an additional 1/4 turn.



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