

## Material Specifications – 15 for Meter Registers and Register Boxes

**1. GENERAL:**

Meters shall be furnished with meter registers that comply with AWWA C707. They shall be compatible with the Automatic Meter Reading (AMR) system in use by Denver Water. The AMR system will be Itron Model 60W series ERTs.

**2. REGISTERS/REGISTER BOXES:**

Registers shall comply with AWWA Standard C707 and shall be either electronic pulser or electronic digital encoder with a permanent potted wire connection for the Itron Model 60W series Encoder-Receiver-Transmitter (ERT) unit. Meters shall be factory wired and potted to either a 5-foot long or a 20-foot long wiring harness with a female, water tight, quick connect terminal that is approved by Itron. Wire lengths will be clearly indicated on Denver Water's purchase order.

Each register shall be delivered pre-programmed to provide electronic readings for 6 dials or 3 boards, as appropriate for the brand of meter. Electronic precision for a pulser register shall be one gallon; electronic precision for an encoder register shall be 50 gallons or less.

The register must be compatible with Itron Model 60W ERTs using Itron WYSIWYG ROCLs. Registers shall be straight reading, magnetic drive, U. S. gallons that are permanently sealed and protected from the environment. Additionally, they must be protected from tampering by the inclusion of a formed joint that can be unsealed only by the destruction of one or more of the components that form the joint. The register box shall attach to the outer case of the meter by use of an interior or exterior locking device.

**3. REGISTER DIALS:**

Register dials shall comply with AWWA C700, Table 4. Number wheels or stationary zeros that are used for billing purposes (1,000 gallons and up) shall have black numbers against a white background. Digits under 1,000 gallons, whether stationary or movable, shall be white numbers with a black background or shall be indicated by a box on the dial face. The register will be equipped with a test hand and test index circle or a test hand and graduated test number wheel.

**4. REGISTER CAP:**

Register boxes shall be equipped with a register cap that shall completely cover the register lens. The register cap shall be capable of being moved to another register in the event that the meter is moved in order to maintain a match between the stamped meter numbers on the register and on the main meter case.

**5. ACCEPTABLE MANUFACTURERS AND MODELS:**

Badger Meter: RTR Pulser Registers, used with Badger Summator/Splitter  
Neptune Technology Group: ProRead/AutoDetect encoder, R7 enclosure  
Sensus Metering Systems: ECR or ICE encoder register with Denver Water programming

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