

## Material Specification – 15

### METER REGISTERS AND REGISTER BOXES

**1. GENERAL**

Meters shall be compatible with the AMR/AMI system in use by Denver Water and furnished with registers in accordance with AWWA C707 with the following additional requirements or exceptions.

The AMR system shall be Itron Model 100W series ERTs.

ERTs shall be returned to the Manufacturer at their end of life to divert unnecessary waste from the landfill.

The AMI system shall be Badger Orion Cellular LTE Endpoint.

**2. REGISTERS AND REGISTER BOXES**

Registers shall be electronic pulser or electronic digital encoder with a permanent potted wire connection for the AMI or ERT unit.

Registers shall be factory-wired and potted to a 5-foot long minimum wiring harness with a female, watertight, quick-connect terminal approved by Itron. Wire lengths will be indicated by Denver Water.

Each register shall be delivered preprogrammed to provide electronic readings for up to 9 digits, as appropriate for the brand of meter. Electronic precision for a pulser register shall be one gallon; an encoder register shall be 50 gallons or less.

The register shall be compatible with both Itron Model 100W series ERTs using Itron WYSIWYG ROCLs and Badger Orion Cellular LTE Endpoint. Registers shall be straight reading, magnetic drive, U. S. gallons that are permanently sealed and protected from the environment. Additionally, they shall 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 an interior or exterior locking device.

**3. MECHANICAL REGISTER DIALS**

Meter register dials shall be in accordance 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 have white numbers with a black background or shall be indicated by a box on the dial face. The register shall 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 completely covers the register lens. The register cap shall be capable of being moved to another register in the event the meter is moved.

**5. APPROVED MANUFACTURERS AND MODELS**

<b>Manufacturers</b>	<b>Models</b>
Badger Meter, Inc.	HR-E
	HR-E LCD
Mueller Systems – Hersey	Translator Encoder Register
Neptune Technology Group	ProCoder

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