

**Material Specifications – 17
for
MAGNETIC DRIVE COMPOUND TYPE WATER METERS
3-INCH THROUGH 6 INCH**

1. GENERAL:

All magnetic drive compound type water meters 3 inch through 6 inch, furnished under this Standard, shall be manufactured in strict accordance with the latest edition of AWWA C702 and C707, with the following additional requirements. The displacement section of the meter may be of a disc or oscillating piston type, while the main line shall be of the turbine type. Meters shall be designed for easy removal of internal parts without disturbing the connections to the pipeline or removal of the meter. A tapped boss shall be provided near the outlet of the meter to provide for field-testing without removal of the meter. Stainless steel mounting bolts and flange gaskets shall be furnished with each meter.

2. MAIN CASES/FLANGES:

Main cases shall comply with NSF/ANSI 61 requirements. Flanges shall be four hole round type and shall not have slotted holes. The flanges shall be an integral part of the main case and shall be of the same material. Flanges shall not be removable from the main case.

3. REGISTERS/REGISTER BOXES:

Meter registers and register boxes shall comply fully with the requirements of [MS-15](#).

4. METER NUMBERS:

The Denver Water meter number shall be plainly chisel stamped on the meter main case and on brass register caps. This meter number shall be heat stamped in a contrasting color on plastic register caps. The Denver Water meter number shall also be attached to the meter in bar code form 39 using a separate tag. Dimple type stamping methods and paper or plastic number labels affixed to the register are not acceptable.

The manufacturer's serial numbers shall run consecutively for each meter in the group ordered and shall be stamped on the top of the register cap.

5. PISTON/DISC SPINDLES, THRUST ROLLERS, AND THRUST ROLLER BEARING PLATES:

Piston/disc spindles, thrust rollers, and thrust roller bearing plates shall be of monel or stainless steel in accordance with AWWA C702.

6. CHAMBERS:

Chambers shall be made of copper alloy containing not less than 85% copper.

7. MEASURING CHAMBER DIAPHRAGMS:

Measuring chamber diaphragms shall be of monel or stainless steel in accordance to AWWA C702.

8. DRIVE SPINDLE:

Up shaft or drive spindle shall be stainless steel or suitable engineering plastic. Driving pawl and magnet shall be securely fastened to drive spindle in a manner preventing loss of pawl during normal operation of the water meter.

9. EXTERNAL FASTENERS:

All external fasteners shall be stainless steel as described in AWWA C702.

10. TORRENT SECTION:

The torrent section shall be constructed in accordance with AWWA C702 and will be provided with stainless steel fasteners.

11. TEST CERTIFICATIONS:

All meters shall comply with American Water Works Association test requirements for new coldwater compound type water meters. Each meter shall be furnished with a tag attached to the meter identifying the results of the certified accuracy tests performed by manufacturer. This tag shall identify the meter by the manufacturer's meter number, the Denver Water meter number, and a bar code representation in form 39 of the Denver Water meter number.

12. DOCUMENTATION:

As noted above, the meter shall have a firmly attached tag documenting the manufacturer's serial number, the Denver Water meter number, a bar code representation of the Denver Water meter number, manufacturer's certified test results, and other identifying characteristics such as nominal size, manufacturer, meter model number, register type and model, etc. Each shipment of meters shall be accompanied by a CD-ROM or USB drive containing a file with this information in tabular form for uploading into Denver Water's meter inventory system.

13. ACCEPTABLE MANUFACTURERS AND MODELS:

Badger Meters, Inc.: RCDL Compound Series Meter with RTR Pulser registers (may be used with Badger Summator/Splitter)

Sensus Metering Systems: SRH Compound Meter with ECR or ICE encoder registers programmed to Denver Water's specific requirements.

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Magnetic Drive Compound Type Water Meters 3-Inch Through 6-Inch