

CERTIFIED WATER FLOWMETERS



(Implementing Kansas Administrative Regulation 5-1-12)

March 24, 2010

The following water flowmeters have been certified by their manufacturers to be in compliance with the Kansas specifications for water flowmeters as defined in Kansas Administrative Regulation (K.A.R.) 5-1-4. These flowmeters are acceptable for use where the Chief Engineer has required a water flowmeter pursuant to K.A.R. 5-1-7. In addition, if the Chief Engineer has required a water flowmeter, the flowmeter must be installed to conform with specifications in K.A.R. 5-1-6 and maintained in compliance (see K.A.R. 5-1-8 and 5-1-9).

Note: Certification of a water flowmeter model does not indicate endorsement by the Chief Engineer, the Division of Water Resources, or the Department of Agriculture.

Badger Meter, Inc.		
Model Number	Type and Size	DWR Requirements
160	Turbine 1½"	
200	Turbine 2"	
450	Turbine 3"	
1000	Turbine 4"	
2000	Turbine 6"	
3500	Turbine 8"	
5500	Turbine 10"	
6200	Turbine 12"	
6600	Turbine 16"	
10000	Turbine 20"	
Recordall 170	Positive Displacement 2"	w/wire seal per drawing S-907

Elster\AMCO\ABB\Kent Water Metering Systems		
Model Number	Type and Size	DWR Requirements
T-3000	Turbine 1½" to 8"	
T-4000	Turbine 1½" to 12"	
TS-4000	Turbine 1½" to 12"	
H-3000	Turbine 3"	
HT-4000	Turbine 3"	
C-3000	Compound 2", 3", 6", 8"	
C-4000	Compound 2" to 4"	
C-700	Positive displacement 5/8" to 2"	
M-700	Multijet 5/8" to 2"	
MFE w/MRE4 register	Full Bore Electromagnetic ½" to 24"	vendor provided cover bolt w/ hole
MFF w/MFE4 register	Full Bore Electromagnetic 28" to 84"	vendor provided cover bolt w/ hole
Aquamaster Electronic Water Meter	Full Bore Electromagnetic 5/8" to 24"	
evoQ4	Full Bore Electromagnetic 2" to 12"	

Emerson\Dieterich Standard\Rosemount		
Model Number	Type and Size	DWR Requirements
Probar, PBR+25S HAMSO MP4C0 2 A 1 A M T1 QD1	Differential Pressure Insertion tubes, 4" to 42"	Totalizer by M&D Controls, Flowtube w/ Straightening Vanes
Probar, PNF+10S HVMS0 FAS 2 A 1 A M T1 QD1	Differential Pressure Insertion tubes, ½" to 2"	Totalizer by M&D Controls, Flowtube w/ Straightening Vanes
ES Pro, PSR+26S MM4C0 2 2 MD4C0 QD1 QD2 QS1 T1	Differential Pressure Insertion tubes, 4 to 42"	Totalizer by M&D Controls, Flowtube w/ Straightening Vanes
8700 Series w/8712 remote register	Full Bore Electromagnetic .5" to 36"	equipped w/ Integral Tamperproof Kit, part# 08721-0547-0001
8700 Series w/8732 C integral register	Full Bore Electromagnetic .5" to 36"	T-1 non-volatile config only and equipped w/ Integral Tamperproof Kit, part# 08721-0547-0001
8700 Series w/8732 E integral transmitter	Full Bore Electromagnetic .5" to 36"	equipped w/ Integral Tamperproof Kit, part# 08721-0547-0001

Endress + Hauser, Inc.		
Model Number	Type and Size	DWR Requirements
Proline Promag 50W	Full Bore Electromagnetic 1" to 78"	
Proline Promag 50P	Full Bore Electromagnetic ½" to 24"	
Proline Promag 50H	Full Bore Electromagnetic 1/12" to 4"	

Hersey Meters		
Model Number	Type and Size	DWR Requirements
Horizon	Turbine 1½", 2", 3", 4", 6", 8", 10"	
MVR 30	Vertical turbine ¾" x ½"	
MVR 30A	Vertical turbine ¾"	
MVR 30B	Vertical turbine ¾" x 1"	
MVR 50	Vertical turbine 1"	
MVR 100	Vertical turbine 1½"	
MVR 160	Vertical turbine 2"	
MVR 350	Vertical turbine 3"	
MVR 650	Vertical turbine 4"	
MVR 1300	Vertical turbine 6"	
430IIS	Positive Displacement (5/8")	
442IIS	Positive Displacement (¾")	
452IIS	Positive Displacement (1")	
562IIS	Positive Displacement (1½")	
572IIS	Positive Displacement (2")	

Invensys\Foxboro		
Model Number	Type and Size	DWR Requirements
9100A w/integral or remote mount IMT25 transmitter	Full Bore Electromagnetic 1" to 78"	(ECEP 14356 configuration, sealed by FoxBoro rep)
9200A w/integral or remote mount IMT25 transmitter	Full Bore Electromagnetic 1" to 78"	(ECEP 14356 configuration, sealed by FoxBoro rep)
9300A w/integral or remote mount IMT25 transmitter	Full Bore Electromagnetic 1" to 78"	(ECEP 14356 configuration, sealed by FoxBoro rep)

Krohne, Inc.		
Model Number	Type and Size	DWR Requirements
IFS 4000 KC (Environmag) w/IFC 010K signal converter	Full Bore Electromagnetic 1" to 12"	

Master Meter, Inc.		
Model Number	Type and Size	DWR Requirements
MJ04	MM2, MM2FP	Multi-jet 5/8" x 1/2"
MJ05	MM3	Multi-jet 5/8" x 3/4"
MJ06	MM4	Multi-jet 3/4" to 7 1/2" long
MJ07		Multi-jet 3/4" to 9" long
MJ08		Multi-jet 3/4" x 1"
MJ09	MM5, MM5FP	Multi-jet 1"
MJ10	MM6T	Multi-jet 1 1/2" threaded end
MJ11	MM6F	Multi-jet 1 1/2" flanged end
MJ12	MM7T	Multi-jet 2" threaded end
MJ13	MM7F	Multi-jet 2" flanged end
TM11	1 1/2" MMT	Turbine 1 1/2"
TM13	2" MMT, 2" MMTII	Turbine 2"
TM14	3" MMT	Turbine 3"
TM15	4" MMT	Turbine 4"
TM16	6" MMT	Turbine 6"
TM17	8" MMT	Turbine 8"

McCrometer		
Model Number	Type and Size	DWR Requirements
MF100	Propeller 2" to 12"	with straightening vanes insert
MG100	Propeller 3" to 24"	with straightening vanes insert
ML100	Propeller 6" to 12"	with straightening vanes insert
MS100	Propeller 3" to 24"	with straightening vanes insert
MT100	Propeller 3" to 4"	with straightening vanes insert
MO300 *(See GPM approved flowtube section)	Propeller 4" to 16"	mounted in flowtube with straightening vanes
MD300 *(See GPM approved flowtube section)	Propeller 4" to 16"	mounted in flowtube with straightening vanes
MW500	Propeller 2" to 24"	
MZ500	Propeller 2" to 24"	
QW500	Propeller 2" to 24"	
QZ500	Propeller 2" to 24"	
SW500	Propeller 4" to 36"	
SZ500	Propeller 4" to 36"	
MM800	Propeller 3" to 24"	
MW800	Propeller 3" to 24"	
MG900	Propeller 2" to 24"	

MT900	Propeller 2" to 24"	
MW900	Propeller 2" to 24"	
V2150	Differential Pressure 4" to 18"	V2-KS-Spec
V2300	Differential Pressure 4" to 18"	V2-KS-Spec

Neptune Technology		
Model Number	Type and Size	DWR Requirements
T-10	Positive displacement 5/8" to 2"	
T-10 Double Check	Positive displacement 5/8"	
HP Turbine	Turbine 1½" to 20"	Install with optional strainer upstream and with minimum 2 special order SB44 bolts
HP Fire Service Turbine	Turbine 3" to 10"	Install with optional strainer upstream and with minimum 2 special order SB44 bolts
TRU/FLO Compound	Positive displacement/turbine 2" to 8"	Install with optional strainer upstream and with minimum 2 special order SB44 bolts

Netafim USA \ ARAD		
Model Number	Type and Size	DWR Requirements
WT	Turbine 2" to 12"	
WMR	Turbine 2"	
WST	Turbine 2" to 8"	

SeaMetrics		
Model Number	Type and Size	DWR Requirements
AG1000 w/built in register display	Full Bore Electromagnetic 4" to 12"	
AG1100 w/built in register display	Full Bore Electromagnetic 4" to 12"	
AG2000 w/built in register display	Full Bore Electromagnetic 4" to 12"	
AG2100 w/built in register display	Full Bore Electromagnetic 4" to 12"	

Sensus Metering\Invensys\Precision\Rockwell		
Model Number	Type and Size	DWR Requirements
101	Propeller 3" to 36"	
SRH compound	Compound turbine, piston 2" to 6"	
Series W	Turbo 1½" to 16"	
PMX	Multi-jet 5/8" to 2"	
PMM	Multi-jet 5/8" to 2"	
Magnum II Type-C	Turbine 2" to 12"	
Magnum II Type-S	Turbine 1½" to 8"	
Omni T ²	Turbine 1½", 2", 3", 4", 6", 8", 10"	
Omni C ²	Turbine 1½", 2", 3", 4", 6", 8", 10"	
Omni F ²	Turbine 1½", 2", 3", 4", 6", 8", 10"	

Siemens		
Model Number	Type and Size	DWR Requirements
MAG 3100 w/5000CT transmitter	Full Bore Electromagnetic ½" to 78"	Configured in the custody transfer cold water pattern approval (PTB OIML R49) and wire sealed
MAG 3100 w/6000CT transmitter	Full Bore Electromagnetic ½" to 78"	Configured in the custody transfer cold water pattern approval (PTB OIML R49) and wire sealed
MAG 5100 w/5000CT transmitter	Full Bore Electromagnetic 1" to 48"	Configured in the custody transfer cold water pattern approval (PTB OIML R49) and wire sealed
MAG 5100 w/6000CT transmitter	Full Bore Electromagnetic 1" to 48"	Configured in the custody transfer cold water pattern approval (PTB OIML R49) and wire sealed
MAG 8000	Full Bore Electromagnetic 1" to 24"	

Sparling		
Model Number	Type and Size	DWR Requirements
FM 102 w/FT190, FT191 or FT193 totalizer	Propeller 4" to 14"	4" pipe size must have bolt in vanes in tube
FM 103 w/FT190, FT191 or FT193 totalizer	Propeller 4" to 14"	4" pipe size must have bolt in vanes in tube
FM 104 w/FT194 totalizer	Propeller 4" to 14"	4" pipe size must have bolt in vanes in tube
FM 182 w/FT190, FT191 or FT193 totalizer	Propeller 16" to 72"	
FM 183 w/FT190, FT191 or FT 193 totalizer	Propeller 16" to 30"	
FM 184 w/FT194 totalizer	Propeller 16" to 72"	
FM 312 w/FT190, FT191 or FT193 totalizer	Propeller 4" to 14"	4" pipe size must have bolt in vanes in tube
FM 314 w/FT194 totalizer	Propeller 4" to 14"	4" pipe size must have bolt in vanes in tube
Tigermag EP FM 626	Full Bore Electromagnetic 0.1" to 4"	EP models must be ordered with custom password
Tigermag EP FM 627	Full Bore Electromagnetic 1" to 4"	EP models must be ordered with custom password
Tigermag EP FM 656	Full Bore Electromagnetic 0.5" to 72"	EP models must be ordered with custom password
Tigermag EP FM 657	Full Bore Electromagnetic 6" to 48"	EP models must be ordered with custom password

Water Specialties, Inc.		
Model Number	Type and Size	DWR Requirements
LP-31 and LP-31-D	Propeller 4" to 20"	Flowtube & straightening vane insert
LP-32 and LP-32-D	Propeller 6" to 20"	Flowtube & straightening vane insert
LP-03	Propeller 4" to 16"	
LP-04 and LP-04-D	Propeller 4" to 16"	
LP-11	Propeller 4" to 12"	
LP-12 and LP-12-D	Propeller 4" to 16"	
ML-03	Propeller 3" to 48"	
ML-04 and ML-04-D	Propeller 3" to 48"	
ML-07	Propeller 3" to 48"	
ML-08 and ML-08-D	Propeller 3" to 48"	
ML-11	Propeller 3" to 48"	
ML-12 and ML-12-D	Propeller 3" to 48"	
VF-29	Propeller 4" to 20"	
VF-30 and VF-30-D	Propeller 4" to 20"	

UltraMag UM-06	Full Bore Electromagnetic 2" to 48"	
UltraMag UM-08	Full Bore Electromagnetic 2" to 20"	

Yokogawa Corp.		
Model Number	Type and Size	DWR Requirements
Digital Yewflo(DYxx)	Vortex 0.5" to 12"	with straightening vanes
Yewflo YF100, style E	Vortex 0.5" to 12"	with straightening vanes
Admag AE series	Full Bore Electromagnetic 0.1" to 16"	
Admag AM series	Full Bore Electromagnetic 0.1" to 8"	
Admag AXF w/integral or remote AXFA14 or AXF11 converter	Full Bore Electromagnetic 0.1 to 104"	Admag AXF & SE models must be tagged and password protected by vendor
Admag SE w/SE14 converter	Full Bore Electromagnetic 0.5" to 104"	Admag AXF & SE models must be tagged and password protected by vendor

FLOW TUBE MANUFACTURERS

Manufacturers approved by Great Plains Meter, Inc. (GPM) to construct **aluminum and steel** flow tubes (Measuring Chamber), conforming to GPM Specification 07/02. The following tubes have been approved for **use with McCrometer MD300 and MO300 saddle type propeller meters**. The inside diameter of the tube must match the inside diameter that the propeller meter was calibrated to. A properly located straightening vane insert is a required component of the final meter/tube assembly. The flow tube will be labeled with an identification tag indicating the manufacturer's name, direction of flow and that the tube has been constructed to meet GPM specification 07/02.

Manufacturing Company

T-L Irrigation
 Republican Valley Irrigation
 Ace Irrigation and Manufacturing
 GLB Meters
 Central Valley Irrigation, Inc
 Vitus Service Center
 Western Irrigation, Inc.
 Schumacher Irrigation, Inc.
 Riggs Irrigation, LLC
 Farm Land Irrigation
 The Garden City Company

Location

Hastings, NE
 Clay Center KS
 Kearney, NE
 Hugoton, KS
 Holdredge, NE
 Hoxie, KS
 Garden City, KS
 Platte Center, NE
 Sumner, KS
 Grand Island, NE
 Garden City, KS (steel tubes only)

Manufacturers approved by Great Plains Meter, Inc. (GPM) to construct **PVC** flow tubes (Measuring Chamber), conforming to GPM Specification 07/02. The following tubes have been approved for **use with McCrometer MD300 and MO300 saddle type propeller meters only in situations where the water being metered would corrode a metal flow tube**. The inside diameter of the tube must match the inside diameter that the propeller meter was calibrated to. A properly located bolt-on straightening vane is a required component of the final meter/tube assembly. The flow tube will be labeled with an identification tag indicating the manufacturer's name, direction of flow and that the tube has been constructed to meet GPM specification 07/02.

Manufacturing Company

Western Irrigation, Inc.

Location

Garden City, KS

Pivot Riser Manufacturers

Manufacturers listed below have met Great Plains Meter, Inc. standards of quality and consistency for the construction of pivot risers. The pivot risers they manufacturer are considered acceptable for use as a GPM approved water flowmeter measurement chamber.

A **standard decal** issued by GPM must be **visibly located and permanently attached** to the pivot riser. The decal shall identify the installed vertical meter's **model and serial number**, the **outside and inside diameter** of the riser pipe, and the **pivot riser manufacturer**.

Only **bolt in style straightening vanes** are acceptable for use in these pivot riser installations and must be installed within five pipe diameters upstream of the water flowmeter sensor.

Pivot Riser Manufacturing Company

Valmont Industries

Lindsay Manufacturing

Reinke Manufacturing

Pierce Corporation

Universal Irrigation

T-L Irrigation

Olsen Irrigation