

## ZENNER Cast Iron Turbine Meters

Models: ZTM and ZTML

Sizes 2" through 12"

**INTRODUCTION:** ZENNER Cast Iron Turbine Meters are designed for applications where flows are usually moderate to high and occasionally low. They are used in measurement of potable cold water in commercial and industrial services where flows are in one direction.

**OPERATION:** Water flows through the turbine section which causes the rotor to turn proportionately to the quantity of water flowing through the meter. A drive magnet transmits the motion of the rotor to a driven magnet located within the hermetically sealed register. The magnet is connected to a gear train which translates the rotations into volume totalization displayed on the register dial face. The only moving parts in the meter are the rotor assembly and vertical shaft.

**CONSTRUCTION:** ZENNER Cast Iron Turbine Meters consist of four basic components: The main housing, cover plate, measuring element, and sealed register. The main housing and cover plate are made of epoxy coated ductile cast iron with round flanges, except for the 2" ZTML02 meter which has oval flanges. The measuring element assembly includes the rotor assembly, vertical shaft and a calibration vane which eliminates the need for calibration change gears.

**MAINTENANCE:** ZENNER Cast Iron Turbine Meters are engineered and manufactured to provide long-term service and operate virtually maintenance free. If necessary the unitized measuring element (UME) can be removed from the main case for maintenance. Interchangeability of certain parts between like sized meters minimizes spare parts inventory. A built-in test port on the ZTML Models makes it possible to field test installed meters.

**CONFORMANCE:** ZENNER Cast Iron Turbine Meters are tested and comply with AWWA C701 Class II performance standards. These Meters comply with the lead-free provisions of the Safe Drinking Water Act and are certified to NSF/ANSI Standards 61 and 372.

**STRAINERS:** ZENNER recommends the use of a separate strainer upstream from the turbine meter. Strainers reduce the chance of damage to the rotor as well as the frequency in which it must be removed for inspection. The lack of a strainer may void the warranty of the turbine meter.

**CONNECTIONS:** Companion flanges for installation of meters on various pipe types and sizes are available in bronze or cast iron.



ZTM03



ZTML03

### ZENNER USA

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MODEL		ZTM02	ZTM03	ZTM04	ZTM06	ZTM08	ZTM10	ZTM12
SIZE		2"	3"	4"	6"	8"	10"	12"
Flow rate maximum intermittent	USGPM	400	550	1250	2500	4500	7000	8800
Maximum continuous	USGPM	200	450	1000	2000	3500	5500	6200
Optimum operating flow range	USGPM	3 - 200	5 - 550	10 - 1250	20 - 2500	30 - 4500	50 - 7000	90 - 8800
Low flow rate	USGPM	2	2-1/2	5	12	20	45	65
Start-up flow rate	USGPM	7/8	1-1/8	1-3/8	7-1/2	8	15	15
Maximum Working Pressure	P.S.I.	150	150	150	150	150	150	150
Maximum Temperature	Deg. F	150	150	150	150	150	150	150
Length	Inches	7-7/8	8-7/8	9-7/8	11-7/8	13-3/4	17-3/4	19-5/8
Height	Inches	8	9	10	12	14	15-3/4	18-3/4
Width	Inches	6	7-1/2	9	11	13-1/2	16	19
Weight	Pounds	20	33	42	58	110	172	230
Number of holes per flange		4	4	8	8	8	12	12

MODEL		ZTML02	ZTML03	ZTML04	ZTML06	ZTML08		
SIZE		2"	3"	4"	6"	8"		
Flow rate maximum intermittent	USGPM	400	550	1250	2500	4500		
Maximum continuous	USGPM	200	450	1000	2000	3500		
Optimum operating flow range	USGPM	3 - 200	5 - 550	10 - 1250	20 - 2500	30 - 4500		
Low flow rate	USGPM	2	2-1/2	5	12	20		
Start-up flow rate	USGPM	7/8	1-1/8	1-3/8	7-1/2	8		
Maximum Working Pressure	P.S.I.	150	150	150	150	150		
Maximum Temperature	Deg. F	150	150	150	150	150		
Length	Inches	10	12	14	18	20		
Height	Inches	8	9	10	12	14		
Width	Inches	6	7-1/2	9	11	13-1/2		
Weight	Pounds	17	33	49	89	122		
Number of holes per flange		2	4	8	8	8		

NOTE: Model ZTML Turbine Meters have a built-in test port. Model ZTML02 has a test port with 1" NPT Threads. Models ZTML03, ZTML04, ZTML06 and ZTML08 have a test port with 2" NTP Threads.