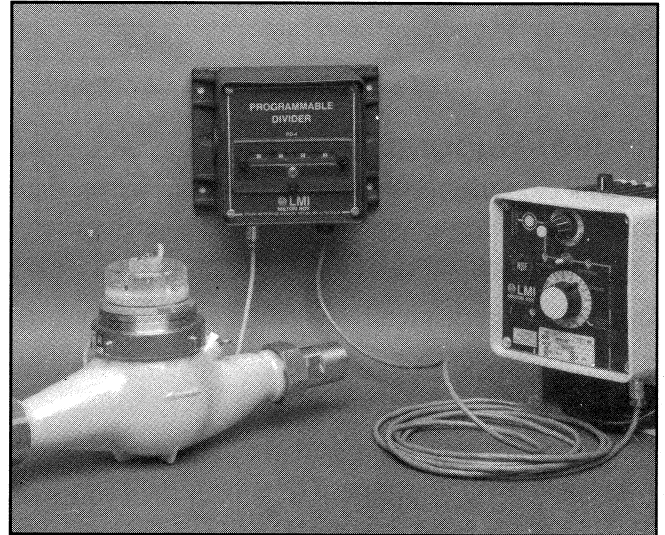


# Information Sheet

## Remote Programmable Flowmeter-Pulsers

*Variable flow rates require a flow proportional dosing system. LMI's Remote Flowmeter-Pulsers provides a precise flow proportional dosing system that is simple to install and easy to maintain.*



### Accessibility

LMI's Remote Flowmeter-Pulsers allow you to install the Flowmeter in your pipeline and to wall mount the Remote Programmable Divider up to 100 ft (30 m) away, where it provides easy user access.

### Simple System Requirements

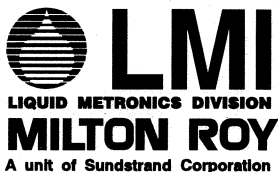
For automatic flow proportioning, all that is required is the LMI Remote Programmable Flowmeter-Pulsers and an LMI dosing pump sized to fit the additive flow rate. No timers, relays or control valves are required.

### Rugged Construction

The Flowmeter body is constructed of cast bronze. The register is mounted directly to the Flowmeter and is hermetically sealed. The register is completely separated from the waterway and driven by a ceramic magnet.

### A Size for All Applications

- Line sizes from 3/4" to 6"
- Flow rates from .44 to 1300 GPM (0.4 to 295 M<sup>3</sup>/H)
- Line pressures to 200 psi (13.8 Bar)
- Water temperatures from 32° F to 130° F (0° C to 55° C)
- Complies with or exceeds all AWWA Class 1 turbine meter performance and material standards.



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## Simple Operation

As liquid flows through the Flowmeter, a magnetic pickup external to the flow stream senses each rotation of the high speed rotor. These pulses are transmitted to the Remote Programmable Divider. The divider accumulates the number of pulses and triggers the LMI dosing pump to stroke once for the set number of pulses.

The Remote Programmable Divider permits you to set the ratio of pulses to pump strokes at any ratio between 1:1 and 9999:1. Combined with the 10 to 1 adjustability of the LMI dosing pump's stroke length and alterations to the solution concentration, the additive injection ratios exceed five hundred million to one. Consult the RFP Instruction Manual for further details on setting the divider.

## Simple, Rugged Design

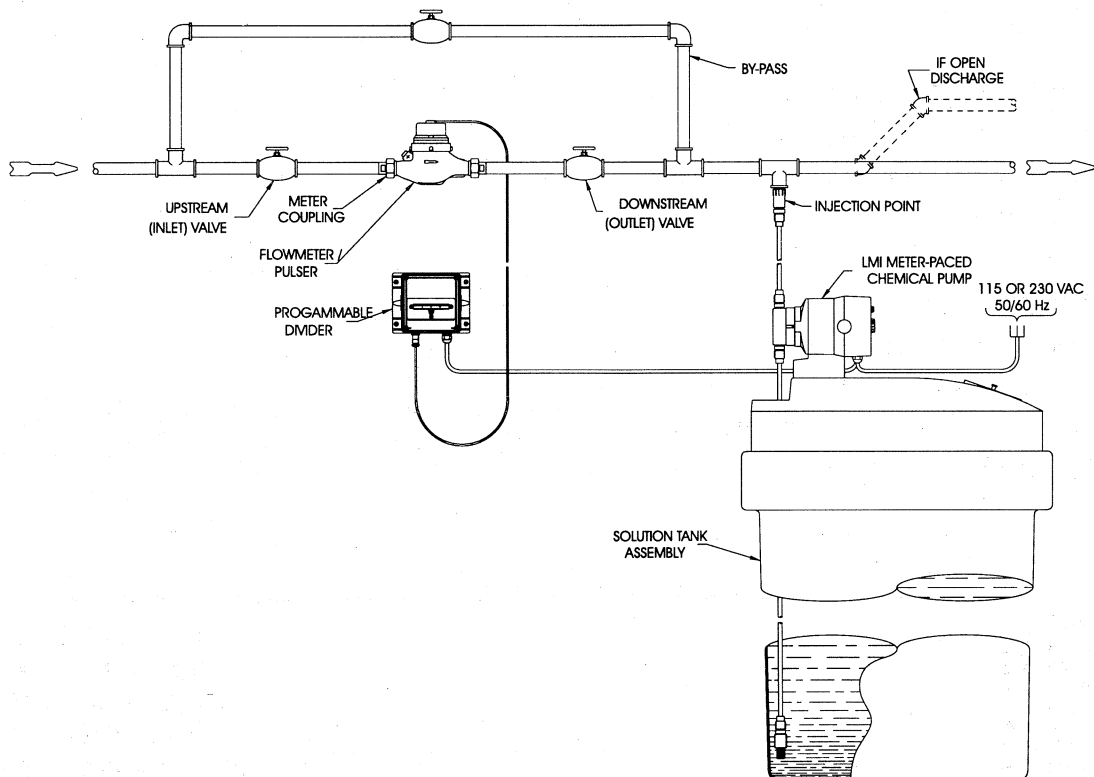
The RFP Flowmeter is a magnetic drive turbine meter that provides long life over a wide range of flow rates. The only moving part in the wetted space is the multi-jet impeller. This isolation eliminates any possibility of contamination. The register is dustproof as well as water proof, and is easy to read.

The register is hermetically sealed, preventing moisture and condensation.

The register is held in place by a polypropylene clamp band which allows you to turn the register to the most convenient reading position.

The measuring chamber is constructed of a Noryl plastic inlet hub and polypropylene rotor. Models RFP-07, RFP-10 and RFP-15 have a polypropylene strainer while all other models have a stainless steel strainer.

## Typical Installation



## 1. Select Your Flowmeter

- Determine the required pipe size or mounting flange.
- Determine the maximum and minimum flowrate of the flowmeter.
- Select your flowmeter model from the chart below:

Model	Pipe Size	Flow-GPM*		Flow-LPM*		Primary Pulses per U.S. Gallon	Primary Pulses per Liter
		MIN	MAX	MIN	MAX		
RFP-07	3/4"	0.44	20	1.7	76	62.7	16.6
RFP-10	1"	0.80	50	3.0	189	34.0	9.0
RFP-15	1-1/2"	1.40	85	5.3	322	13.3	3.5
RFP-20	2"	1.75	130	6.6	492	13.3	3.5
RFP-30	3"	5.00	350	18.9	1325	7.7	2.0
RFP-40	4"	5.00	650	18.9	2460	4.8	1.3
RFP-60	6"	9.00	1300	34.1	4921	1.0	0.3

## 2. Select Your Metering Pump

- Be sure the metering pump selected is an LMI Series A7, A9, B7, B9, C7 or C9 type pump. These pumps are equipped with an external input jack for use with RFP flowmeters. Note: For use with A9, B9 and C9 pumps consult the factory or your local distributor.
- When using the RFP flowmeter, the speed control function is bypassed and taken over by the divider unit. The speed of the pump is controlled automatically based on the flow of the water through the flowmeter. On the Series A7, external mode is accomplished by turning the speed knob fully counter-clockwise. On Series B7 and C7 pumps, a switch is provided to place the pump in the external mode.
- Be sure the pump's pressure rating exceeds the system pressure by a minimum of 20%. For example, if system pressure equals 100 psi (6.9 Bar), the pump rating should be 120 psi (8.3 Bar) or greater.

- Use this calculation to determine pump output in gallons per hour (GPH\*).

$$\frac{\text{Max. flowrate of water through flowmeter (in GPM*)} \times \text{Desired concentration (in PPM*)}}{\text{Percent concentration of pumping solution (expressed as a whole number)}} = \boxed{\phantom{000}} \times .006 = \boxed{\phantom{000}} \text{ (A) (Required pump output in GPH*)}$$

Example A:

$$\frac{70 \text{ (GPM*)} \times 4 \text{ (PPM*)}}{5.25 \text{ (\% solution expressed as a whole number)}} = \boxed{53.33} \times .006 = \boxed{.32} \text{ (A) (Required pump output in GPH*)}$$

Example Results: Select an A77 pump with  GPH\* max. output at 140 psi.

## Flowmeter Specifications

Model	RFP-07	RFP-10	RFP-15	RFP-20	RFP-30	RFP-40	RFP-60
Meter Type	Multi-Jet Impeller, Magnetic Drive				Magnetic Drive Turbine		
Body Material	Bronze						
Register Type	Straight Reading U.S. Gallons Protected by High Impact, Resistant plastic Hermetically sealed. High Impact, Resistant plastic,				Straight Reading U.S. Gallons Protected by Hermetically sealed.		
Totalizer Digits	7				8		
Service Temp	F(°C)	32 - 120 (0 - 50)				32 - 130 (0 - 55)	
MAX Op. Pressure	psi (Bar)	200 (13.8)				150 (10.3)	

Model No.		RFP-07	RFP-10	RFP-15	RFP-20	RFP-30	RFP-40	RFP-60
Nominal Size	inch	3/4	1	1-1/2	2	3	4	6
	mm	20	25	40	50	75	100	150
L	inch	7.5	10.25	11.81	10.62	12	14	18
	mm	190	260	300	270	305	356	457
L1	inch	11.34	14.87	17.25	-	-	-	-
	mm	288	378	438	-	-	-	-
H	inch	5.35	5.79	6.34	8.6	8.44	9.37	12.56
	mm	136	147	161	218	214	240	319
h	inch	1.61	1.75	1.81	3.27	3.87	4.62	6
	mm	41	44	46	83	99	117	152
D	inch	1	1.25	2	6.5	7.5	9	18
	mm	-	-	-	165	190	228	457
BC	inch	-	-	-	4.75	6	7.5	9.5
	mm	-	-	-	121	152	190	241
Bolt Size	inch	-	-	-	5/8	3/4	3/4	3/4
	mm	-	-	-	16	19	19	19
No. of Bolts		-	-	-	4	4	8	8
Net Weight	lbs	4.6	6.8	13.0	25.8	42	68	135
	kg	2.1	3.1	5.9	11.7	19.1	30.8	61.2

