

## **CALCULATING FLOW RATES**

Accurately calculating an outlet's flow rate allows a customer to determine the volume of water (in litres per second) to be ordered and what is being delivered to their property, and therefore the total volume of water being applied to a particular patch or crop during an irrigation.

### **Calculation Method**

To calculate flow,

1. time how long it takes to deliver 10,000 litres (200 mm meter) or 1,000 litres (150 mm and 80 mm meters);
2. then divide 10,000 litres or 1,000 litres by the number of seconds it took to deliver that volume of water (calculated in Step One above); and
3. this provides you with your answer - the litres per second being delivered.

### **Examples**

#### **Using a 200 mm Meter**

1. Time how long it takes for the meter to deliver 10,000 litres, e.g. for the meter to go from 355.90 to 355.91. Assume this took 195 seconds.
2. Divide 10,000 (litres) by 195 (seconds).
3. The result is litres per second – in this example it is 51.28 litres per second.

#### **Using either a 150 mm or 80 mm Meters**

1. Time how long it takes for the meter to deliver 1,000 litres, e.g. for the meter to go from 355.900 to 355.901. This took 35 seconds.
2. Divide 1,000 (litres) by 35 (seconds).
3. The result is litres per second – in this example it is 28.57 litres per second.

### **IMPORTANT NOTE**

The longer time period used to measure water flow, the more water is delivered, and therefore the more accurate the reading will be.

A sheet designed to assist customers measure the volume of water being delivered to their property is provided overleaf.

**LITRES PER SECOND CONVERSION TABLE**

Test Time		Test Litres											
Min: Sec	Sec ds	1000	2000	3000	4000	5000	6000	7000	8000	9000	1000 0	1500 0	2000 0
0:20	20	50	100										
0:30	30	33	67	100									
0:40	40	25	50	75	100								
0:50	50	20	40	60	80	100							
1:00	60	17	33	50	67	83	100						
1:10	70	14	29	43	57	71	86	100					
1:20	80	13	25	38	50	63	75	88	100				
1:30	90	11	22	33	44	56	67	78	89	100			
1:40	100	10	20	30	40	50	60	70	80	90	100		
1:50	110	9	18	27	36	45	55	64	73	82	91	136	
2:00	120	8	17	25	33	42	50	58	67	75	83	125	167
2:10	130	8	15	23	31	38	46	54	62	69	77	115	154
2:20	140	7	14	21	29	36	43	50	57	64	71	107	143
2:30	150	7	13	20	27	33	40	47	53	60	67	100	133
2:40	160	6	13	19	25	31	38	44	50	56	63	94	125
2:50	170	6	12		24	29	35	41	47	53	59	88	118
3:00	180	6	11	17	22	28	33	39	44	50	56	83	111
3:10	190	5	11	16	21	26	32	37	42	47	53	79	105
3:20	200	5	10	15	20	25	30	35	40	45	50	75	100
3:30	210	5	10	14	19	24	29	33	38	43	48	71	95
3:40	220	5	9	14	18	23	27	32	36	41	45	68	91
3:50	230	4	9	13	17	22	26	30	35	39	43	65	87
4:00	240	4	8	13	17	21	25	29	33	38	42	63	83
4:10	250	4	8	12	16	20	24	28	32	36	40	60	80
4:20	260	4	8	12	15	19	23	27	31	35	38	58	77
4:30	270	4	7	11	15	19	22	26	30	33	37	56	74

WMI Customer Handbook

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4:40	280	4	7	11	14	18	21	25	29	32	36	54	71
4:50	290	3	7	10	14	17	21	24	28	31	34	52	69
5:00	300	3	7	10	13	17	20	23	27	30	33	50	67

## Meter Reading Method

Monitoring of water use by customers is relatively simple as all WMI meters record water use in megalitres. Use the examples below to calculate the flow being delivered to your outlet.

200mm Meters					
Black Numbers				Red Numbers	
1,000 ML	100ML	10 ML	1 ML	100,000 l	10,000 l
<b>Current Reading</b>					
2	4	8	9	7	8
<b>Previous Reading</b>					
1	2	4	5	6	7
<b>Usage</b>					
1	2	4	4	1	1

In the example above usage = 1,244.11 ML.

150mm and 80mm Meters					
Black Numbers			Red Numbers		
100 ML	10 ML	1 ML	100,000 l	10,000 l	1,000 l
<b>Current Reading</b>					
3	6	8	8	9	4
<b>Previous Reading</b>					
2	4	5	4	5	3
<b>Usage</b>					
1	2	3	4	4	1

1

2

3

4

4

1

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**In the example above usage = 123.441 ML.**

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## 32mm and 50mm Meters

### Black Numbers

100 ML	10 ML	1 ML	100,000 1	10,000 1	1,000 1
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### Current Reading

0	0	2	1	0	6
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### Previous Reading

0	0	1	6	8	1
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### Usage

0	0	0	4	2	5
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In the example above usage = 0.425 ML.