



Ref: FAQ-0062

Version: 1.0

Title – Pulse Rate Rule of Thumb

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### Question –

How can I choose the best pulse and sampling rate for my logger based on flow or the diameter of the pipe?

### Answer –

#### Typical pulse values based on Pipe Diameter;

<80mm - 1 litre per pulse  
80-150mm - 10 litre per pulse  
150 – 400mm - 100 litre per pulse  
>400mm - 1000 litre per pulse

#### Selecting the most suitable pulse rate;

The absolute maximum Pulse rate for Radcom Loggers can be assumed to be 64 pulses per second.

If you log at 15 minute intervals then the true maximum is 36 pulses per second.

If you log faster (e.g. 5 minute) then you can have more pulses per second (but not more than 64)

If you log slower (e.g. 1 hour) then you need to have less pulses per second (36 divided by 4 = maximum 9 pulses per second)

So take the maximum flow in litre/second and divide it by the pulse factor (litre/pulse) this will give you the pulses in 1 second

E.g.

30 litre / second (physical maximum flow in pipe)  
10 litre /pulse (pulse factor)  
= 3 pulses per second (2700 pulses in 15 minutes)

In each logging period (e.g. 15mins) there should be more than 1 pulse so check the minimum also (resolution would be very poor with only 1 pulse)

E.g.

1 litre / second (physical minimum flow in pipe)  
10 litre /pulse (pulse factor)  
= 0.1 pulses per second (90 pulses in 15 minutes)

#### Document History:

| Edition | Date of Issue | Modification | Notes |
|---------|---------------|--------------|-------|
| 1st     |               |              |       |
|         |               |              |       |
|         |               |              |       |