

Platypus Sprinkler Hints and How To Information

<i>Sprinkler pressure, flow and spacing</i>	2
<i>Rule of thumb guide for pipe sizing</i>	2
<i>Maximum number of sprinklers per line strainer</i>	2
<i>Recommended bracket spacing for pipework</i>	2
<i>Benefits of Flow Control Inserts</i>	3
<i>How to Draw Your Roof Plan</i>	4
<i>How to Calculate the Number of Sprinklers Required</i>	5
<i>Ridge and Hip Spacing Guide</i>	6-7
<i>How to Choose the Right Pump</i>	8
<i>Pump Information</i>	9

Platypus Fire Pty Ltd
makers of the



PLATYPUS[®]
CONTROLLER

and



PLATYPUS[®]
SPRINKLER

The Sensible Bushfire Protection System

Platypus Fire Pty Ltd makers of the



The Sensible Bushfire Protection System

Sprinkler pressure, flow and spacing

Nozzle sizes available	Maximum spacing between sprinkler heads	Nominal flow rate using our Flow Control Insert
2.5mm	3.5 metres	6 lpm
3.2mm	3.5 metres	9 lpm
4.0mm	4.0 metres	14 lpm

Maximum angle of sprinkler installation is 35° off vertical for effective operation.
 Recommended minimum operating pressure at pump is 500kpa.
 Optimum operating pressure at each sprinkler head is 300kpa.
 We recommend using our Flow Control Inserts to ensure optimum performance.

Rule of thumb guide for pipe sizing

Nozzle size	Max. number of sprinklers for 20mm copper	Max. number of sprinklers for 25mm copper	Max. number of sprinklers for 32mm copper	Max. number of sprinklers for 40mm copper
2.5mm	5	10	17	26
3.2mm	3	6	11	15
4.0mm	2	4	6	10

Maximum number of sprinklers per line strainer

	25mm	32mm	40mm	50mm
2.5mm sprinkler	10	15	25	35
3.2mm sprinkler	6	10	15	20
4.0mm sprinkler	4	6	10	15

Recommended bracket spacing for pipework

Copper tube	Vertical pipe	Horizontal pipe
15mm & 20mm	1.5 metres	1.0 metres
25mm	2.0 metres	1.5 metres
32mm & 40mm	2.5 metres	1.8 metres
50mm	3.0 metres	2.2 metres

PVC Pipe	Vertical pipe	Horizontal pipe
20mm	1.4 metres	0.70 metres
25mm	1.5 metres	0.75 metres
32mm	1.7 metres	0.85 metres
40mm	1.8 metres	0.90 metres
50mm	2.1 metres	1.05 metres

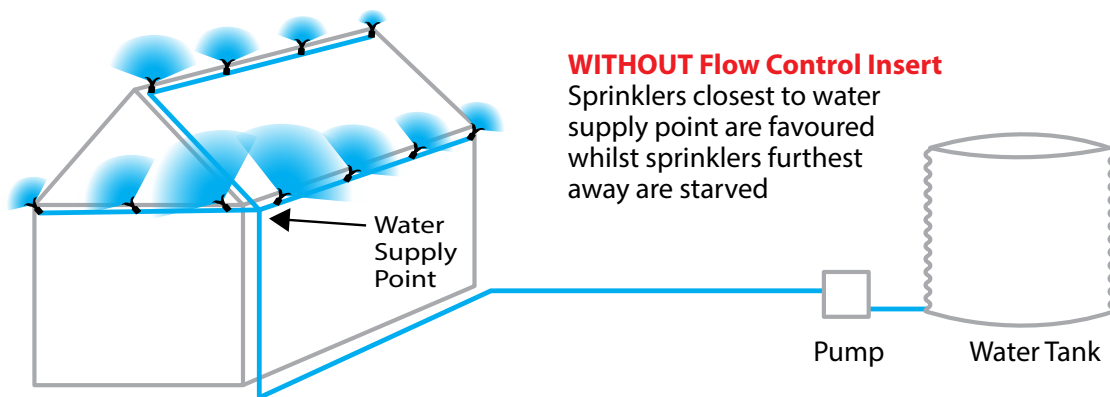
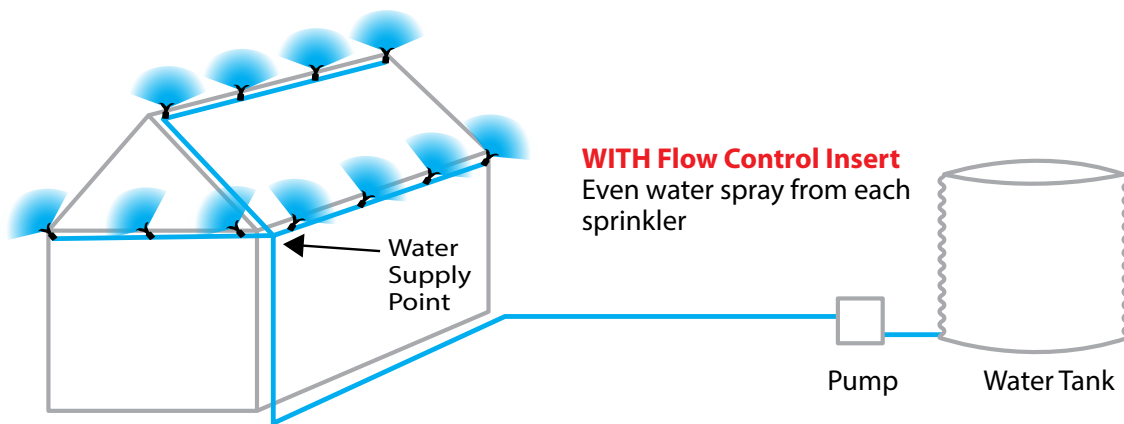


PLATYPUS[®] SPRINKLER

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Benefits of using Flow Control Inserts

- Flow Control Inserts are installed at each sprinkler
- Flow Control Inserts only available for 2.5mm and 3.2mm nozzles

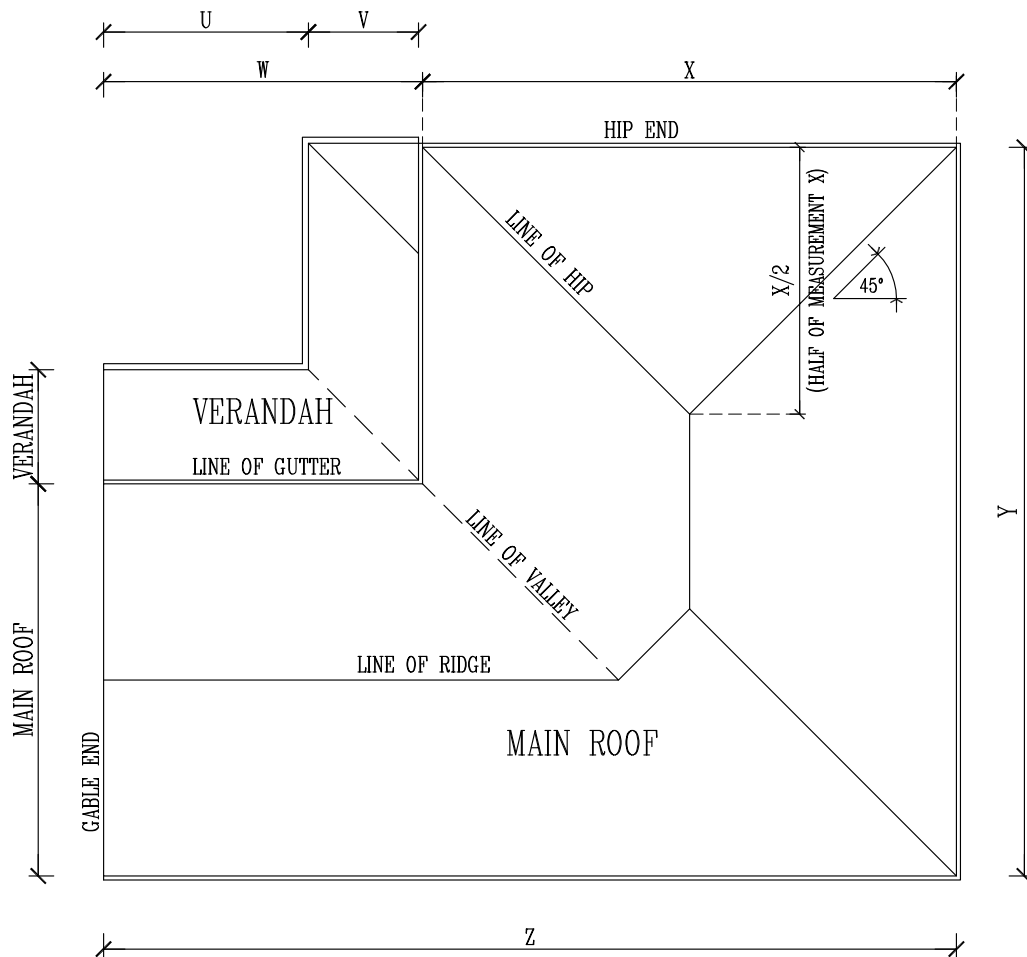




How to draw your roof plan

Carefully measure around the outside of your roof line.

- All valleys and hips are drawn in this plan at a 45 degree angle
- Start your plan by drawing the perimeter lines, then add your hip and valley lines, and lastly connect with ridge lines.
- Measure and draw all verandahs that are not part of the main roof line and dimension separately.
- Draw your plan to scale. 1m measured = 1cm drawn





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How to Calculate Number of Sprinklers

Measure the length of each sprinkler run off your plan, find the measurement in the table below to determine the number of sprinklers.

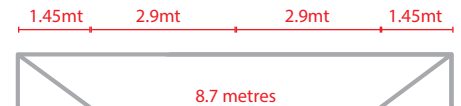
Divide the length of your sprinkler run by the number of sprinklers shown in the table, this gives you the centre distance between the sprinkler's, divide centre distance measurement in half to determine the distance in to the sprinkler's at each end of the sprinkler run (see example below)

Sprinkler Spacing Table for 2.5mm & 3.2mm nozzle

Length of sprinkler run	Number of sprinklers
0 to 3.5mt	1
3.6 to 7mt	2
7.1 to 10.5mt	3
10.6 to 14mt	4
14.1 to 17.5mt	5
17.6 to 21mt	6
21.1mt to 24.5mt	7
24.6mt to 28mt	8
28.1 to 31.5mt	9
31.6mt to 35mt	10

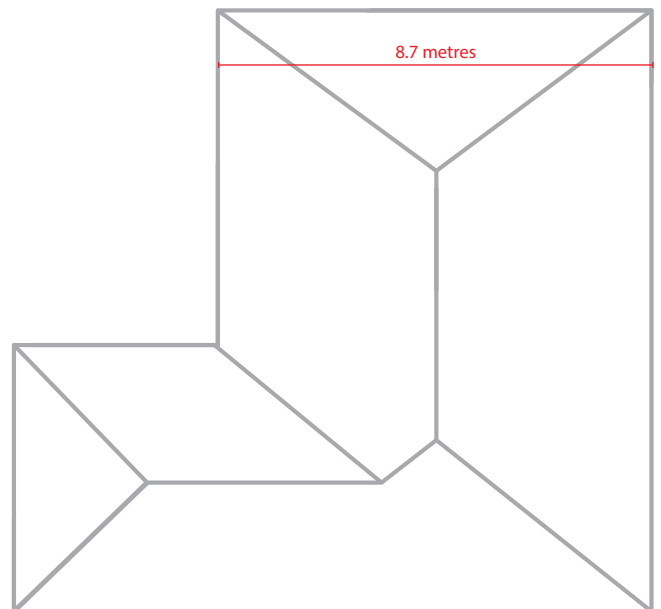
Example:

8.7 metre section = 3 sprinklers
 $8.7 \div 3 = 2.9$ metres
 $2.9 \text{ metres} \div 2 = 1.45$ metres



Sprinkler Spacing Table for 4.0mm nozzle

Length of sprinkler run	Number of sprinklers
0 to 4mt	1
4.1 to 8mt	2
8.1 to 12mt	3
12.1 to 16mt	4
16.1 to 20mt	5
20.1 to 24mt	6
24.1mt to 28mt	7
28.1mt to 32mt	8
32.1 to 36mt	9
36.1mt to 40mt	10





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How to choose the right pump

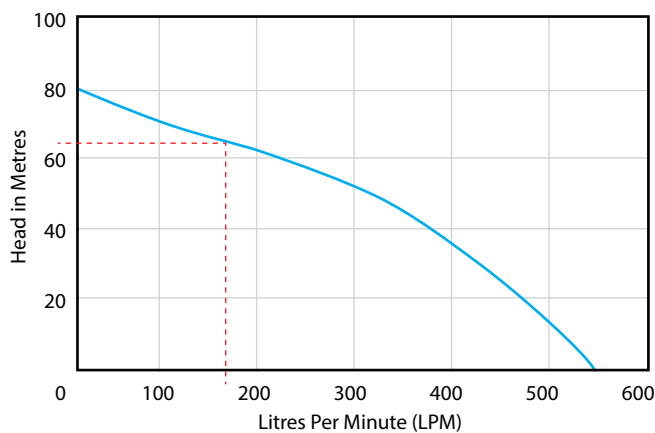
Once you have worked out how many sprinklers you will be installing, multiply the number of sprinklers by the nominal flow rate, depending on the nozzle size (see chart on page 2).

Example: House requires 28 sprinklers with 2.5mm nozzle @ 6 LPM each; $28 \times 6 = 168$ say 170 LPM.

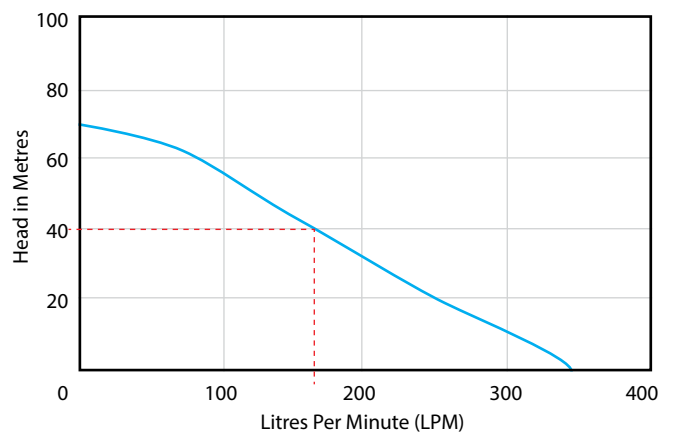
Find the 170 LPM point on the bottom of the table, draw a line up to where it meets the curve, then draw a line across to check the head in metres. For a single storey home where the pump, tank and house are on the same level, ensure the pump delivers the required flow rate at or above 50mt.

As shown on the below examples, the Example Curve B pump delivers the required flow at approx. 37mt head which is too low. The Example Curve A pump delivers the required flow of approx. 65mt, so the Example Curve A is the pump to select in this case.

Example Curve A



Example Curve B



Note: Additional pump performance would be required for two storey houses. If the pump is located on a lower level (down hill) or a long distance from the house, check with Platypus Fire PL or your pump supplier for further advice.



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Diesel and petrol driven pump information

Air cooled diesel engine run times

	Fuel tank capacity in liters	Run time at 3000rpm	Run time at 3600rpm	Warranty term*
Yanmar L48	2.4	2.60 Hours	2.3 Hours	2 years
Yanmar L70	3.3	2.50 Hours	2.2 Hours	2 years
Yanmar L100	5.4	2.80 Hours	2.5 Hours	2 years
Kohler KD350	4.3	3.20 Hours	2.9 Hours	3 years
Hatz 1D81	10.0	3.25 Hours	n/a	2 years

Air cooled petrol engine run times

	Fuel tank capacity in liters	Run time at 3000rpm	Run time at 3600rpm	Warranty term*
Honda GX160	3.1	-	2.2 Hours	3 years
Honda GX200	3.1	-	1.8 Hours	3 years
Kohler CH270	4.0	-	-	3 years
Robin EX21	3.6	3.25 Hours	-	3 years

* Check specific terms with supplier at time of purchase.

Engine run times using Platypus Controller cycle times (Diesel engines only)

	5mins on / 10mins off	10mins on / 10mins off	10mins on / 5mins off
Yanmar L48	7.30 Hours	4.9 Hours	3.6 Hours
Yanmar L70	7.00 Hours	4.7 Hours	3.5 Hours
Yanmar L100	7.90 Hours	5.3 Hours	3.9 Hours
Kohler KD350	9.10 Hours	6.1 Hours	4.5 Hours
Hatz 1D81	9.75 Hours	6.5 Hours	4.8 Hours

Run / Pause cycle times are set by the user / installer up to a maximum of 60 minutes.

Recommended max ambient air temp

- Air Cooled Diesel 45°C
- Air Cooled Petrol 35°C

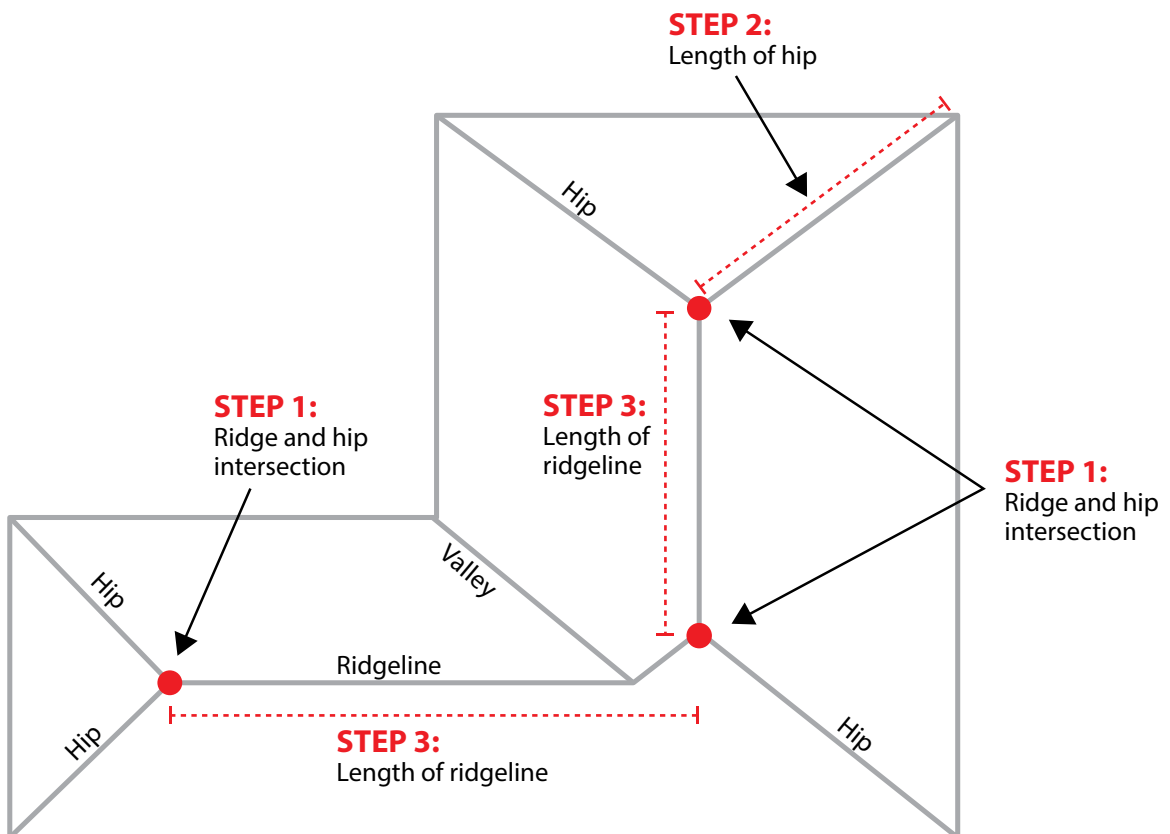


Ridge and hip sprinkler spacing guide (Sprinklers on roof only)

STEP 1 - For a "Roof Only System", mark sprinkler positions at each of the points where the hip meets a ridgeline.

STEP 2 - Measure the lengths of the hips and use the tables on our 'How to calculate the number of sprinklers' info sheet to determine the number and position of the sprinklers.

STEP 3 - Measure the length of the ridgeline between the sprinklers you marked in Step 1 and use the table again to calculate the number and position of the sprinklers.





Ridge and hip sprinkler spacing guide (Sprinklers on roof and fascia)

STEP 1 - For a "Roof & Fascia System" mark sprinkler positions at each of the points where a hip meets a ridge.

STEP 2 - draw a dotted line 3.5mt from the fascia line. Measure the lengths of the hips from the sprinkler marked in step 1 to the dotted line, and use the tables in our 'How to calculate the number of sprinklers' info page to determine the number and position of the sprinklers.

STEP 3 - Measure the length of the ridgeline between the sprinklers you marked in Step 1 and use the table again to calculate the number and position of the sprinklers.

