



# A NEW WAY TO SPRAY

## SPRAYERS GUIDE TO SPRAY NOZZLE FLOW RATES

[www.prosprayers.co.uk](http://www.prosprayers.co.uk)

There are 4 basic types of nozzle that are used for our backpack and compression sprayers.

### 1 ADJUSTABLE CONE NOZZLES

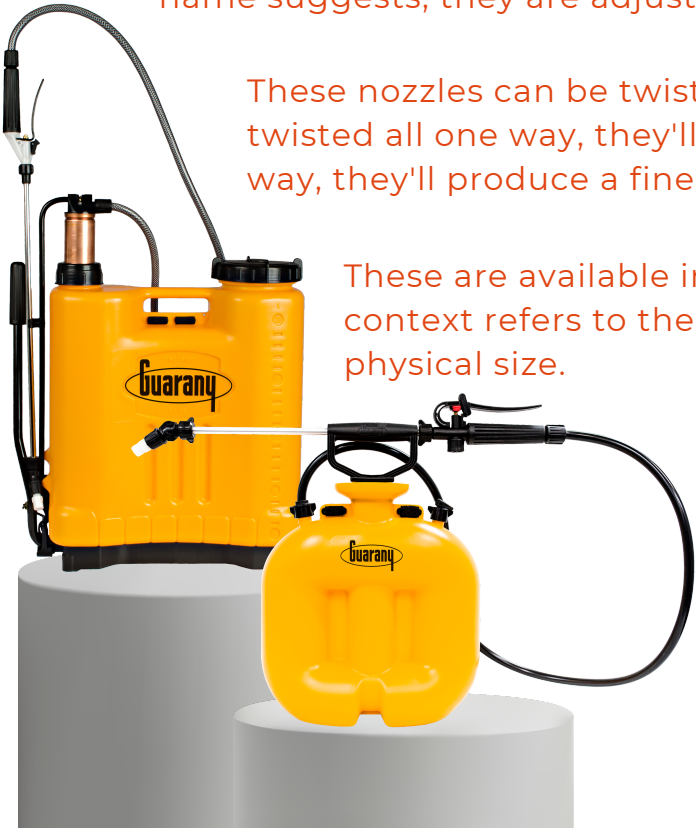


Adjustable cone nozzles produce a hollow cone spray pattern and as the name suggests, they are adjustable.

These nozzles can be twisted to produce a different spray pattern; twisted all one way, they'll produce a jet of spray. Twisted all the other way, they'll produce a finely misted hollow cone pattern.

These are available in 4 different sizes. The word 'size' in this context refers to the flow rate through the nozzle rather than the physical size.

It is paramount to understand what pressure the flow rate is being measured at; any spray nozzle will produce a flow rate that is dependant on the pressure that it actually sees.



## [www.prosprayers.co.uk](http://www.prosprayers.co.uk)

The higher the pressure, the higher the flow rate. The lower the pressure, the lower the flow rate.

In order to compare different nozzles, a particular pressure needs to be standardised. That standard, for various historical reasons, is 40 PSI (2.75 bar).

Black nozzle: 0.21 l/m  
Red nozzle: 0.3 l/m  
Green nozzle: 0.41 l/m  
White nozzle: 0.52 l/m  
(All at 40 PSI)



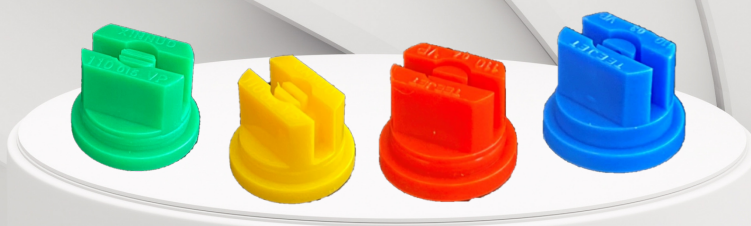
The black tip adjustable cone nozzle will deliver just under half the flow rate of the white one at any given pressure.

All the nozzles of different 'sizes' will all fit on the same sprayer as they have the same fittings for them.

## 2 STANDARD FAN TIP NOZZLES

Standard fan tips produce a flat fan spray pattern which is effectively a line of spray. These are colour coded by flow rate and you'll commonly see yellow, green, blue and red tips being used on our sprayers.

They also come with different spray angles which are often 80 or 110 degrees.







[www.prosprayers.co.uk](http://www.prosprayers.co.uk)

### 3 DEFLECTOR FAN NOZZLES



Deflector fan nozzles operate in a slightly different way; a flat fan spray pattern is produced by deflecting the spray off a deflector plate to achieve a more coarsely atomised spray. This can be useful in windy conditions when it's important to avoid spray drift for example.



### 4 FIXED CONE TIP NOZZLES

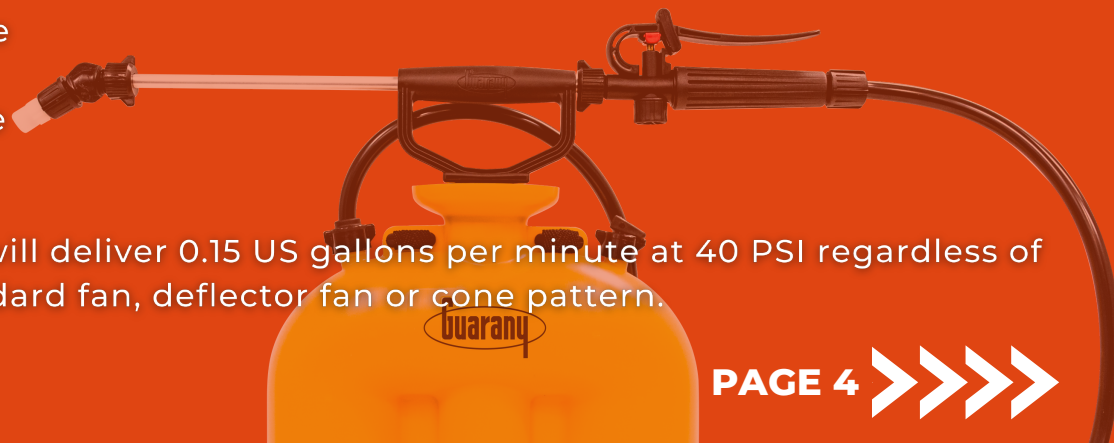
Fixed cone tips can either be hollow cone or full cone and they're non-adjustable nozzles that produce a fixed spray angle cone pattern.



All the fixed nozzle types, (flat fan, deflector flat fan and fixed cone nozzles), are colour coded and conform to an international standard. These nozzles also have number coding to dictate the flow rate at 40 PSI in US gallons per minute.

- Green tip: 015 nozzle
- Blue tip: 03 nozzle
- Yellow tip: 02 nozzle
- Red tip: 04 nozzle

So, a green 015 tip will deliver 0.15 US gallons per minute at 40 PSI regardless of whether it is a standard fan, deflector fan or cone pattern.



PAGE 4 >>>>

**www.prosprayers.co.uk**

The measurement of US gallons per minute is not used in the UK but can be easily converted to litres per minute at 1 bar.

We created this table to compare the various nozzles mentioned in this article.

NOZZLE	FLOW AT 1 BAR (L/M)
Fan (Red 04)	0.92
Fan (Blue 03)	0.69
Fan (Yellow 02)	0.46
Fan (Green 015)	0.35
Adjustable Cone (White)	0.31
Adjustable Cone (Green)	0.25
Fan (Orange 01)	0.23
Adjustable Cone (Red)	0.18
Adjustable Cone (Black)	0.13

As can be seen, the adjustable hollow cone nozzles tend to produce quite a lot lower flow rates than fan and fixed nozzles.



NEXT: SPRAYERS GUIDE  
TO SPRAY ANGLES