

Guide to backpack sprayers

There are many knapsack sprayers on the market. The variation in price and quality is quite staggering. It is possible to buy a sprayer for as little as £20 with premium models retailing for well over £100. This is clearly a huge price variance and at first glance a sprayer may be misunderstood as being a very simple device and thus

there would be little justification for the higher priced units.



This guide attempts to put to bed that idea and explains the often hidden design features that make the more expensive sprayers available generally better value for money than their cheaper counterparts.

Of course it needs to be stressed that cheaper £20 sprayers do have their place in the market. For infrequent, very light usage or if purchased for a specific one

off job they may be the best choice of product. If, however, one is going to be conducting regular spraying or desires a product that will last for many years then this guide will help to highlight the features to look out for when selecting a good model.

Is it robust?

Sprayers tend to get knocked around a bit, particularly when being used by contractors and other busy professionals. As the whole job of the sprayer is to deliver fluid even small knocks can potentially loosen fittings and cause leaks. Lower quality sprayers will be prone to this type of damage or, even worse, to punctures in a fragile main tank.

Points to check

The main tank – does it seem sturdy and sufficiently thick? Cheaper models will use lower grade plastics and/or have thinner walls. Good models will just feel strong!

What the lance is made of – cheap plastic lances will easily break or snap. Metal lances are generally tougher and will generally be easier to bend back into place in the event of an accident.

Will it leak?

This is the main operating problem with any sprayer. Quite apart from being potentially dangerous to the operator, waste chemicals can also cause considerable damage if herbicide is delivered in the wrong place as a consequence of a leak. Good quality



sprayers will have been pressure tested as part of the manufacturers QC process, they will be rated to operate without leakage up to a certain pressure.

Points to check

Quality of the connectors and seals – the important bits to check are where the flexible hose connects to the lance and to main tank. If these connection points look cheap then they will likely be the source of leaks as they wear.

Will it wear?

As with any fluid moving equipment, over time any sprayer will eventually wear out but a good quality machine should last many years even with regular use. In contrast poor quality machines will tend to fail after a short time. As with overall robustness this often comes down to the quality of materials used to make the sprayer parts and the quality of the engineering.

Points to check

The pump – This is the main moving part of the sprayer and so is the one that will experience most wear so it is well worth checking for quality. Does the pump look sturdy and well made? What is the pump made from? Plastic piston pumps tend to wear far quicker than brass ones for example.

The pumping handle – Does it look strong and is the hinge connector to the main

body made well and constructed from durable materials? The handle is going to experience considerable torque and is going to be used a lot so weak looking hinges are going to break pretty quickly.

Is there adequate filtration?

Blocking of nozzles is a hassle. Most nozzle tips will have a built in filter just before the nozzle but this is a last ditch attempt to stop blocking and should never be relied on as the only filtration in the system. Good sprayers will have integrated filtration steps prior to the nozzle.



Points to check

Filling filter – all sprayers should have a filter at the fill point

Pump filter – as the fluid passes through the pump it should be filtered again

Lance filter – after the pump a further filter should be present prior to entry into the lance

Internal agitator – this helps prevent sediment from forming and reduces the strain on filtration

Really good sprayers will have all of the above.

Can you fill it easily?

Often this simple feature is over looked on the cheaper brands. Quick and easy filling even when an integrated filter is in place is actually a very important design feature and not one that is easy to achieve.

Points to check

Size of the fill hole – is it big enough to allow for rapid filling

Size of the filling filter – all filters will slow down fluid that passes through them but if the filter has a sufficiently large surface area then it will not impede filling. Poor models will have inadequately large filling filters to save costs.

Can you accessorise?

The basic spray lance that comes with most sprayers is certainly useful but it is not suitable for all jobs. Good quality manufacturers will have a range of compatible lance extensions, booms and nozzle types making the sprayer a far more versatile piece of kit. Other common accessories to look out for are dosing valves (for precise dosing), weed shields (for containing



the spray) and flow regulators.



Points to check

Good range of lances and booms – you never know when the sprayer might need to be re-purposed for a different job so if these are available then it may save buying a whole new system.

Good range of nozzles, valves and dosing systems – these might not be needed for your particular application but if a good range is available then it is a sign that the supplier is used to servicing the professional market. This is probably an indicator of overall quality.

Will it be comfortable?

If the sprayer is being used very infrequently then comfort is probably not a huge concern but for the professional garden contractor having a poorly ergonomically optimised sprayer can quite literally be a real pain in the back. It is not something to be taken lightly, the 20 litre sprayers will weigh up to 25kg when full so if not positioned correctly back problems can quickly result.

Points to check

Shape of the tank – does it look like it has been shaped well to a human back?

Quality of the straps – are they fully adjustable

Changeable orientation – good sprayers can swap the sides of the pumping handle and the outlet hose meaning they can be used left and right handed.

Conclusions

As with most things in life quality comes at a price. The above guide hopefully highlights some of the unseen design features that make the more expensive sprayers superior devices. A quality sprayer with all of the features mentioned, if properly maintained, should give many years of hassle free spraying and so represent a good investment. It is, therefore, the choice between good value and being cheap, the wise know the difference.