

GROUPTEST

TECHNICAL EDITOR **CHRIS JUDEN** REVIEWS EASY-TO-USE PUMPS

Portable floor pumps

Many hand pumps require iron sinews to inflate tyres properly. Mini floor pumps don't, as Technical Editor **Chris Juden** shows

ALMOST EVERYONE carries a pump on their bike in case of a puncture, but very few (people and/or pumps) are capable of inflating the tyre to full pressure – not unless a person has the sort of pump we're looking at here.

These are scaled-down versions of a 'track' pump, better described as a floor pump. The main advantage over common push-me-pull-you bike pumps is that the floor pushes back, halving the effort. They also eliminate the risk of valve damage.

I tested all the pumps with 100 strokes into a 32-622 tyre. Three of them had near identical capacity (25mm bore by 200 stroke) and reached similar pressures, around 6 bar (87psi). I then used a narrower tyre to discover how much higher they would go.

1 Pressure gauge

To be certain your tyres are hard enough, it's worth paying and carrying a little extra (typically £7 and 25g) for an integral gauge. These gauges may be somewhat approximate, but are much more precise than your thumb! Without a gauge on the pump, I suggest counting the strokes – once you've measured how many it takes to achieve correct pressures in each of your tyres.

2 Flexible connector

Position the wheel with the valve near the ground, fit the chuck and forget about the risk of a tired hand twisting and pulling on the valve.

The presumed inefficiency of a long connector (back expansion from an increased un-pumped volume) is negated by a non-return valve in the pump base – just like a full-size floor pump.

3 Handle

With this kind of pump, you can bear down with all your upper bodyweight on both hands – provided the handle isn't too painful for the underneath hand! Most fold out to give something bigger to push, and stand far enough above the cylinder not to pinch a fold of skin at the bottom of the stroke.

4 Fat or slim?

Choose a fat-bodied 'mountain' or 'volume' pump to fill big tyres quickly (i.e. with fewer strokes), or a slimline 'road' or 'pressure' model to meet the demands of narrow racing tyres. These pumps are so efficient however, that most people can easily reach the 5 or 6 bar (up to 90psi) demanded by road touring tyres with the high-volume variety.

5 Bracket

Forget pump pegs. These pumps come with a bracket that fits bottle bosses, either offset to one side or central. Offset means no loss of bottle – but it looks odd without one. Central brackets make neat use of those underslung bosses some frames have and come with zip-ties for attachment to bikes of the thirsty. Both designs usually have Velcro straps for extra security.

6 Footwork

Most of these pumps have a fold-down foot for you to stand on, to keep it from lifting and skidding as you pump. If it hasn't, you'll need to trap the base between your feet. On soft ground, find a rock etc. to avoid the pile-driver effect!



Unless you ride a replica penny-farthing like Joff, the disadvantages vastly outweigh the advantages.



TOPEAK TURBO MORPH £35

Although Topeak use a fair bit of plastic, the pump illustrated has endured several years of regular use. And despite being a 'mountain' design, it comfortably reaches 7 bar – and will go higher. The valve chuck must be unclipped (as shown) before folding out the gauge, which is more precise and easier to read than the usual in-line slider. With such a short hose the tyre valve must first be near the ground. Then it takes six actions to deploy the pump, but they're all quick and simple. Length: 35cm. Weight of pump/bracket: 278/18g.

The Topeak Road Morph with gauge (£33, 208g, 35cm, and pictured opposite) is a top pump for high-pressure roadies; it was the only one to get near 11 bar, although with a 25% smaller piston it's not as quick for fatter, lower pressure tyres. Its gauge responds in random jumps of up to 5 psi but is good enough. Minimalists should consider the 26cm, 154g, £27 Mini-Morph (no gauge). topeak.com, extrauk.co.uk
The Turbo Morph is ideal for touring and for commuters without a 'proper' floor pump



LEZYNE MICRO FLOOR DRIVE HVG £42

Lezyne's mostly metal construction feels tough, gives a high-tech look and surprisingly doesn't add weight. A long hose, simply looped over the handle for storage, can reach more than halfway up the wheel when deployed. With only the foot to unfold, deployment takes only three actions but unscrewing and then screwing the chuck onto the valve takes some time. This method of connection is, however, most reliable. The in-line gauge is worth the usual premium: it seems accurate and quite easy to read.

The only thing I really didn't like was the small, hard handle. The pump could surely deliver more than 6 bar but after 100 strokes my hand hurt too much! An offset bracket will suit those without vacant bottle sites who dislike zip-ties. Length: 30cm. Weight: 212/14g. High pressure (HPG) model also available, as are cheaper versions without gauges. lezyne.com, upgradebikes.co.uk
A more expensive product that looks it and may be worth it – if you cycle with gloves



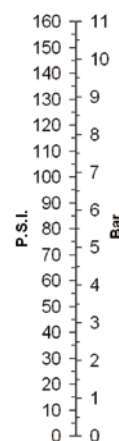
REVOLUTION AIR MINI TRACK PUMP £20

A canny bit of product sourcing by Edinburgh Bicycle brings us all the usual features, including an in-line gauge, at a very keen price. The size, weight and mix of alloy and plastic are similar to Topeak, but the layout is different. A longer hose allows a higher valve position, which is a good thing since the pressure gauge is underneath the chuck, where you can't see it with the valve at the bottom! Deployment is simplicity itself, in four quick actions. There is only one Revolution, fat like a mountain pump but rated up to 140psi. It's an over-ambitious claim. With a comfortably large fold-out handle to push on, I was nevertheless able to reach 9 bar (130psi). The in-line bracket also fits with zip-ties. Length: 34cm. Weight: 250/25g. edinburghbicycle.com
A top value-for-money pump, capable of reaching 9 bar



MEQIX POWER HVL £40

Meqix do make pumps with gauges, but only their cheaper models are imported here. I say cheaper, but this is already quite an expensive pump, mostly metal like Lezyne, but with a shorter hose and shorter overall. This saves a little weight at the cost of a few more strokes to reach the same pressure (100 got 4.5 bar in our test tyre). No foot is perhaps a saving too far, but one can get by without. Even the offset bracket is metal and there are some other neat design features that might justify the price, such as the way the screw-on connector clips into place for quick deployment and leak-free pumping. It too has a tiny handle, but wood feels a bit nicer. Length 25cm. Weight: 172/18g. meqix.com, raleigh.co.uk
Something for the style and weight fanatics



Keeping your tyres pumped up to the right pressure will make punctures less likely and will improve the handling and efficiency of your bike. The range stamped on the sidewall of the tyre is a good guide; whether you need to be at the top or bottom of that range will depend on your weight and preferences. As a rule of thumb, fat (50mm-plus) mountain bike tyres need 2-3 bar, medium (32-37mm) touring or hybrid tyres 5-6 bar, and skinny (23mm or less) road tyres 7 bar-plus. Tandems or cargo bikes may need much more. To convert ratings: 1 bar equals 14.5 psi.

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