

## HEAD-TO-HEAD

# Are premium tools worth the extra cash?

Is it worth spending almost £120 on a basic socket set when you can get one for £20?

**A** **DECENT 3/8IN DRIVE** socket set is the main staple of any home motorcycle mechanic. A selection of 1/2in drive sockets is useful for the big stuff, like wheel-spindle nuts and a 1/4in drive is a nice-to-have for some of the smaller, more fiddly stuff. But a 3/8in set will earn its keep over and over again, on anything from caliper bolts to engine-case fasteners.

You can spend anything from £7 for a 3/8in socket set from an online retailer or auction site to several hundreds of pounds from the nice man in the van that comes round to workshops all over the country. But do you need to?

Motorcycle specialists Oxford produces a range of really useful tools (Matt tried one of the company's mini tool kits last month) and part of its range is this basic but well-produced 3/8in set.

At the other end of the spectrum, King Dick tools produces anything from what it calls its 'Economy' range up to more than £700 for a 3/8in drive set. It's aimed at the professional end of the market and this is part of the reason why race teams buy its tools.

But, as an average home mechanic, do you need to spend nearly £120 on a 3/8in socket set or will a £20 one do the job for you? Let's find out... →



**OXFORD 3/8IN  
SOCKET SET 1** £19.99

➤ [www.oxfordproducts.com](http://www.oxfordproducts.com)

**KING DICK  
TKS 560  
SOCKET SET**

£114.81

➤ [www.kingdicktools.co.uk](http://www.kingdicktools.co.uk)



# How are they different?

**1 MATERIAL**  
Both sets of sockets bear stampings to confirm they are formed from chrome-vanadium steel. This is a fairly common alloy of mild steel, giving high tensile strength and making it very receptive to heat treatments, such as surface hardening. It can be worked well into intricate shapes without suffering damage and tends not to flex much in use

**2 HANDS-ON**  
The Oxford ratchet handle features a soft gel section, which fits the hand nicely. The King Dick has a more rigid handle which is also narrower than the Oxford. This means that the Oxford is more comfortable in use but the flexible material might reduce feel for the fastener. The Oxford ratchet has a more reassuring, metallic feel to it and both use 72 teeth, meaning each can operate with just 5° of clearance

**3 RATCHET**  
Both sets feature a reversible ratchet drive, with push-button retention of the socket. The King Dick has a narrower head, meaning access to fiddly nuts and bolts could be easier but ratchet teeth could be smaller. Each has a thumb lever for the drive direction but they operate in opposite ways – the Oxford needs to be to the left to undo, the King Dick to the right

**4 PRODUCTION**  
The King Dick items are drop forged, meaning that a nugget of material is formed into the relevant shape as a weight drops into a mould. This means the grain structure of the material flows with the shape of the finished product quickly, increasing strength. The parts are machined, heat treated for hardness and finally polished. The Oxford items are also forged, with a matt surface finish

**5 SOCKETS**  
The King Dick set has bi-hexagonal design for all but the 8mm socket, with 12 drive 'teeth' which the company says allows better access to tricky fasteners. The Oxford sockets use a hexagonal design, which potentially helps to reduce the risk of rounding nuts or bolts. However, it does mean that there are only six positions the socket can go on. The King Dick sockets also have slightly narrower walls, to potentially allow for better access to fasteners in tight positions

## THE FACTS

	Oxford	King Dick
Ratchet overall length (mm)	197	200
Length from drive centre to end (mm)	182	185
Width of drive head (mm)	32.5	28.2
OD of 15mm socket (mm)	21.9	20.7
Depth of 15mm socket (mm)	28.2	28.0
Distance across corners, 15mm socket (mm)	17.61	17.46
Distance across flats, 15mm socket (mm)	15.33	15.71
Extension bar length (mm)	N/A	125
T-bar length (mm)	N/A	200
Sockets included (mm)	10, 11, 12, 13, 14, 15, 16, 17, 19, 22	8, 10, 12, 13, 14, 15, 17, 19, 22

**6 IN THE BOX**  
The Oxford set comes with the ratchet handle and ten sockets, ranging from 10mm to 22mm and sits on a plastic rack. The King Dick set comes in a metal box with foam inserts holding nine sockets, from 8mm to 22mm as well as a 125mm (5in) extension bar and a sliding T-bar the same length as the ratchet handle (200mm)

BUT WHAT ARE THEY LIKE TO USE?



**Oxford Socket Set 1**  
Forming part of Oxford's range of tools, the Socket Set 1 is manufactured to the company's own design and specification from chrome-vanadium steel. It sits alongside a range of motorcycle tools designed for the rider who wants to look after their motorcycle themselves.



**1** The soft gel handle fits the hand and is comfy but could reduce feel and get grubby



**2** The ratchet head is relatively large, meaning that access to some fasteners could be tricky



**3** Sockets feature a hexagonal internal design and knurled rings for grip for hand use



**King Dick TKS 560**  
King Dick hangs its hat on professional quality, with a range of sets available, as well as individual components for users to create their own toolkits. The brand is used by the Bike Shed and has also been chosen by various professional motorcycle race teams.



**1** The KD handle is more-solid plastic but it is reasonably sculpted and fills the hand well



**2** The ratchet head is slimmer than the Oxford, for better access to some fasteners



**3** Sockets are 12 pointed and like the Oxfords, feature knurled rings for finger use



# What are they like to use?

We tested both sets in two ways; firstly, we used them for a series of jobs on a variety of vehicles to see what they were like in real life. We also took them to Gedore Torque, which specialises in calibrating torque devices, to empirically test both the ratchets and sockets to assess their ultimate strength.

## In the workshop

Fitting a socket to each ratchet requires pushing the button on the back of the drive. This means after the job at hand, the socket is still on the ratchet and not stuck on a rusty bolt on the bike.

The ratchet direction lever on the King Dick is slightly more positive in its action than the Oxford item while both exhibit a bit of play when a socket is fitted. And though the KD has a smaller ratchet head, both have a

weighty feel to them.

Fitting a socket to a bolt (a caliper mounting bolt and the sump plug on our Tracer 700), the King Dick has a more snug, reassuring feel to it. That's not to say the Oxford doesn't fit well – it does – but there's slightly less play in the KD socket, even with its 12-point drive.

In use on a variety of jobs, both perform well. The Oxford is slightly more comfortable of the two with its softer handle but the marginally smaller outside diameter of the KD sockets mean that they can access recessed fasteners a bit more easily and quickly – something that may be useful for a professional.

The addition of the T-bar in the King Dick set means you won't have to rely on the strength of the ratchet to get a stubborn nut or bolt moving. The extension is also

a handy addition if, for example, you want to adjust front-fork preload.

## In the laboratory

Gedore had machined three hex-head billets of steel in 10mm (M6), 13mm (M8) and 17mm (M10) to fit into its torque testing rig, where the torsional load is applied and the torque measured and displayed on a digital screen.

The ISO-standard minimum torque for a 3/8in ratchet is 135Nm while the maximum recommended torque for an M6 and M8 bolt is 19.1Nm and 46.4Nm respectively.

We started with a 10mm

socket on each ratchet and loaded them to 135Nm – no issues. We increased this to 150Nm – no issues – before continuing to 175Nm – 50% greater than the ratchet minimum. Again, both showed no signs of failure. We continued and at 190Nm, neither would sustain any further torque irrespective of the load applied, indicating we were approaching the limit of the 10mm socket – at ten times the limit of a bolt.

We changed to the 17mm hex-head test billet and sockets and applied torque to see where each would fail. 250Nm came and went and as we got to 300Nm, both ratchets began to show signs of failure – again, the amount of torque measured didn't go up with the increased loading. An impressive – and a little surprising – result.

Both ratchets showed signs of failure at the base of the square-drive section. Also, the Oxford ratchet mechanism felt just as it had done before while the King Dick felt distinctly slack.



▲ Discolouration at the base of the square drive...



▲ ... and cracks forming at the corners on both ratchets showed failures



▲ Super-accurate lab test rig

## Testing results

Ratchet handles retained, load applied torsionally to sockets

	OXFORD	KING DICK
10mm socket failure torque (Nm)	190	190
Ratchet failure torque (Nm)	300	300
17mm socket failure torque (Nm)	>300	>300

# THE *RIDE* VERDICT

## Performance and value from Oxford

The different target user of each of these sets becomes clear the more you use them; the Oxford is comfortable and more than up to home maintenance and fettling. The King Dick, on the other hand, has slightly snuggier socket fit and the packaging and extras are what a professional user would expect.

However, you cannot ignore the empirical testing results – both sets put in a superb performance, surpassing

the minimum requirement by more than double. For £120, that's impressive; for a set that costs just £20, it's amazing.

The KD is very clearly a quality item and of course, here we can't assess life cycles but on the basis of this test, we'd go for the Oxford; it's £20 and is way stronger than any nut or bolt you're likely to use it on. Sure, the soft plastic grip may get grubby but for £20, you can just buy a new one. *R*



▲ That performance at that price, it's Oxford