Designed and put together by one man

One of two new micro-excavators which have appeared on the market in the past few weeks is The Bronse.

Manufactured in Tonbridge, Kent, the machine is very similar in appearance to other micros in what looks like an expanding market.

The Bronse is designed and assembled by Terry Simmonds. He specialises in self-drive hire of the Kubota KH-5 mini excavator and, having had dealings with other micro excavator manufacturers in the past, decided "that there was room for something stronger on the market".

The Bronse certainly looks strongly made. Weighing 480kg, it is powered by the new Honda GX140, a neat little single cylinder, air-cooled overhead valve engine developing 3.72kW at 3000rpm. A coupling converts its power to a small gear pump, permitting an operating pressure of 158bar for the hydraulics.

All the rams, manufactured by Aldershot Hydraulics, are interchangeable and the same company also supplies the pump and spool valve for control of all hydraulic functions on the machine.

Bushings have been used throughout the Bronse wherever there are moveable parts in addition to grease nipples.

Simmonds has designed the front end equipment so that two bucketsful are enough to fill a wheelbarrow. The largest bucket available is 457km wide.

The Bronse is capable of handling this size bucket with ease. The material demonstrated was a sticky clay soil interspersed with thin layers of sandstone and in this the machine achieved a surprisingly good rate of dig with no problems in attaining a good bucketful.

The controls are the 'one for each function' type. To replace these with two lever control would, says Simmonds, add approximately another £300 to the price of the machine. The existing system is easy to use, although a trifle jerky in response. Although this does not affect the machine's stability, which is generally very good, it does make small 'inching' movements difficult.

The comfort of the Bronse, if such a word can be used on a micro excavator, is well thought out. The seat, a Bostrom, is well padded and absorbs much of the vibration of the engine, which is directly mounted to the chassis. The only area where vibration is apparent is in the foot rests, and this is only slight.

The digging depth is 1.5m and Simmonds has designed the slewing arc to be 125deg, measured at the base of the boom. The Bronse is fully roadable with the addition of a wide axled trolley, fitted in place of the outrigger legs, and a towing hitch that is pinned beneath the engine.

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