Breakers 'triple' productivity

Webster Equipment claims its new range of breakers offers triple the power of conventional designs and can even run upwards. So how did it perform when a customer used it on reinforced concrete?

BREAKERS
COLIN SOWMAN

Best known for its rock wheels and slot cutters, attachment specialist Webster Equipment claims its latest breaker will be three times more productive than conventional hammers.

Webster Equipment director Ian Webster tells *CN* he has spent more than 15 years refining the design of the breaker that will attach to mini excavators. The company is trialing a 600 kg unit that fits on 8-to-12-tonne excavators and delivers 4,500 joules of impact energy.

"To get that from a traditional breaker, the unit would weigh between 1,800 kg and two tonnes," Mr Webster says. "It works out that we are getting seven joules of impact energy per kg – roughly three times the output of a conventional design."

At one or two blows per second, the impact rate is far less than a traditional design. But Mr Webster says productivity is much higher, as larger sections of material can be broken using his design.

Shock loadings passing back into the excavator's structure and hydraulic system are said to be much lower than with a standard breaker design and the hydraulic oil does not get as hot.

"Noise and vibration levels are also lower than with the traditional design," he says. "You can stand a glass of water on our breaker when it's running."

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IAN WEBSTER, WEBSTER EQUIPMENT

The impact rate is far lower than traditional designs

While not divulging exactly how the system operates, he says gravity contributes to less than 10 per cent of the breaker's energy, allowing it to be used horizontally or even when facing upwards.

Only a single acting feed is required and according to Mr Webster the breaker will operate with the excavator on tick-over so fuel consumption will be reduced, but this has yet to be quantified.

To reduce 'blank firing', the system will not prime the weight if the breaker's tool is not pressed against a rock or other solid object. According to Mr Webster, the technology could also be applied to dipper-mounted crushers and piling rigs.

The design does not use the finely engineered clearances of traditional systems, so the requirements are expected to be less demanding. These factors are predicted to reduce the excavator's maintenance costs.

Bramley Homes has tested the tool, using it to break out reinforced concrete. Bramley director Danny Hayes says: "The site manager reported considerable noise reduction and operators said the unit was much more powerful than the comparable breaker being used."

More demonstrations are being arranged for interested parties and the company expects to have production versions in four sizes (to suit mini, 7-tonne/backhoe loader, 12-tonne and 20-tonne excavators) available by the end of the year.

Atlas Copco's 'first' on solid body breaker

BREAKERS
DANIEL KEMP

Atlas Copco has launched what it says is the first 700 kg class solid body breaker on the market.

Named as one of the world's 100 most innovative firms by Thomson Reuters, the industrial equipment manufacturer has developed the SB 702, a solid body hydraulic breaker that can be attached to a variety of carriers.

The company, which has celebrated its 140th anniversary, says it is the only 700 kg-class hydraulic breaker with a solid body – it has no tie rods, no side plates, no hammer box and has an integrated accumulator.

Atlas Copco says this makes it "unusually compact" and "easy to handle".

Heavy hydraulic attachments manager Keith Lambourne says he believes there is a need for the SB 702 in the market.

"The SB 702 is extremely durable and easy to maintain with very low running costs," he says. "Due to its high performance and lower weight, you can run it on