



# HOW MUCH WILL IT CRUSH?

This is a logical question to ask, but a difficult question to answer fully.

For most of our BAV-CB crusher bucket range, the very, very short answer is;  
**approximately the weight of the carrier excavator, per hour.**

There are exceptions to this rule of thumb and there are factors which can cause variance both in the positive and negative and we cover these in further detail, for those who want to gain a better understanding of the parameters.

## **Factors which will generally cause a variation in performance:**

- 1. THE CARRIER EXCAVATOR:** Even within the correct weight range of machines for any given BAV-CB crusher bucket, there are variations in make and model, in terms of the performance of the excavator's auxiliary hydraulic circuit. Some machines are better than others. Occasionally, there is also the possibility an excavator can apparently carry out normal tasks and yet the main relief pressure has been set incorrectly. Our crusher buckets rely primarily on pressure (flow is much less critical) so it is always a good idea to check your machine's working pressure.
- 2. THE SELECTED OUTPUT SIZE:** Other than the smallest crusher bucket, the BAV-CB2, buckets have two output grades. It always takes more time and energy to crush to a smaller grade. The finer, smaller output grade will always be slower.
- 3. FEED MATERIAL TYPE:** The ideal is good, clean, general concrete. Softer material like brick or breeze block does not crush as cleanly (it crumbles) and is less dense, so it stands to reason the tonne-per-hour rate will be lower. Very hard concrete or rock will also require more energy to crush (some rock may even be too hard for the attachment), and hence will be slower. Finally, reinforcing in concrete can significantly slow down the crushing process.
- 4. FEED MATERIAL SIZE:** In quarries, they spend a lot of time engineering the blast, to create the optimum feed size for the crushing plant. Unfortunately, in recycling, it is necessary to deal with whatever crops up on site. Chunks which approach the maximum feed thickness or (to a lesser degree) width of the crusher bucket will tend to present more difficulty. Very small items like small paving blocks can also be a bit slower to crush, because they pack out the jaws. The ideal is middling-sized pieces. Large, awkward-shaped or very hard pieces are generally best left to one side, to crush once the rest of the material has been processed, in order. Ideally, having a hydraulic hammer or breaker to reduce oversized or very hard pieces will help greatly.
- 5. FEED MATERIAL QUALITY:** Many of our customers have shared similar stories of badly sorted material. A typical example would involve them being called to site to crush "about 200 tonnes of rubble" and arriving to find roughly 100 tonnes of good, crushable feed material, mixed in with roughly 100 tonnes of soil, dirt or fines. This is not ideal. As far as possible, in order to maximise performance, feed material should be clean of dirt and fines and dry - an attachment such as our BAV-RS screening buckets can help.

In relation to items 2 to 5 above, another the relevance of sorting feed material becomes clear. Screening before crushing, to remove dirt and fines and, also after crushing, to select finer grade can save an enormous amount of time. It is far, far quicker screening than crushing and it takes less energy. If you want to achieve a very fine grade product, it is generally faster to select this by screening. Typically, with a rotary screening bucket (like the BAV-RS range) an excavator is capable of processing material at least twice as fast as it can crush and often up to four to five times faster.