



Jaw Crusher Model JC2500

**Superior primary jaw crusher
engineered for rapid reduction of large
lump ore to 2mm in a single step**



High Performance - Fine Product - Reliable Operation

The Model JC2500 jaw crusher has evolved from Essa Australia's ongoing product improvement programme. It incorporates numerous design enhancements that ensure high throughput, consistently fine product and maximum availability.

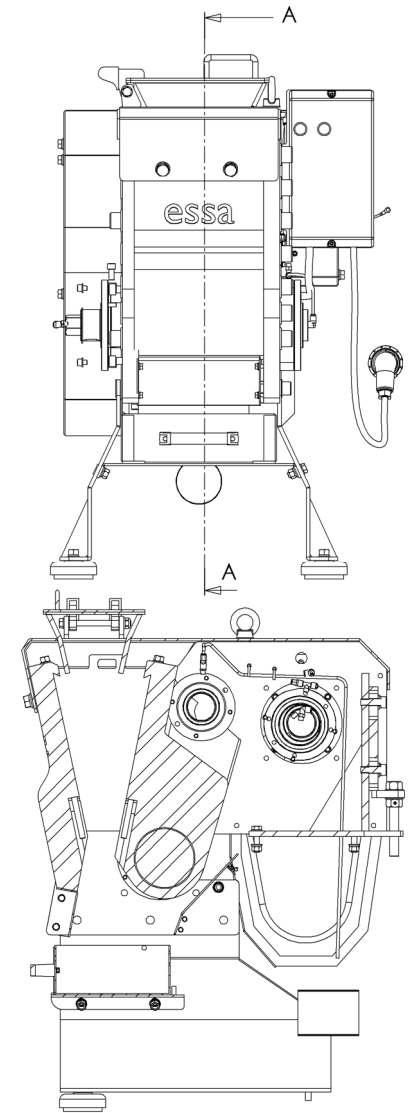
It has been purpose designed to assist exploration laboratories undertaking two-stage sample reduction protocols. It efficiently processes drill core and lump rock up to 110mm in size producing a very fine material suitable for splitting and fine pulverising.

Enhanced Crusher Engineering

The Model JC2500 is unlike ordinary toggle jaw crushers as it uses an oscillating motion, via a Pitman/crank arm arrangement, to rapidly reduce near jaw size lumps to 2mm in a single step.

Design enhancements incorporated in the JC2500 include:

- Increased crushing power - the JC2500 is fitted with a 7.5kW electric motor. This 35% gain in motor size compared with previous models delivers greater crushing capability
- Stronger shafts and bearings - the main crank and two Pitman shafts have been increased in cross sectional area by at least 44%. All moving joints have rolling element bearings
- Strengthened crushing zone - side plate thickness increased from 20mm to 40mm (compared with previous models), side plate redesigned to avoid cracking, heavier Pitman incorporates stiffening webs and the front plate and mounting arrangement has been significantly reinforced
- Innovative jaw clamping mechanism - a T-clamp engages from the bottom of the jaw plate so crushing force is no longer applied to holding bolts
- Electronic shear pin overload protection - mechanical damage to shafts, bearings, jaw plates and/or motor caused by operator misuse (such as over-adjusting so the jaw plates touch or introducing uncrushable material into the crushing chamber) is minimised by the fitting of a overload protection mechanism
- Rebalanced flywheels reduce vibration
- Redesigned jaw plates - innovative design incorporating both serrated and flat surfaces that produces measurably superior crushing results

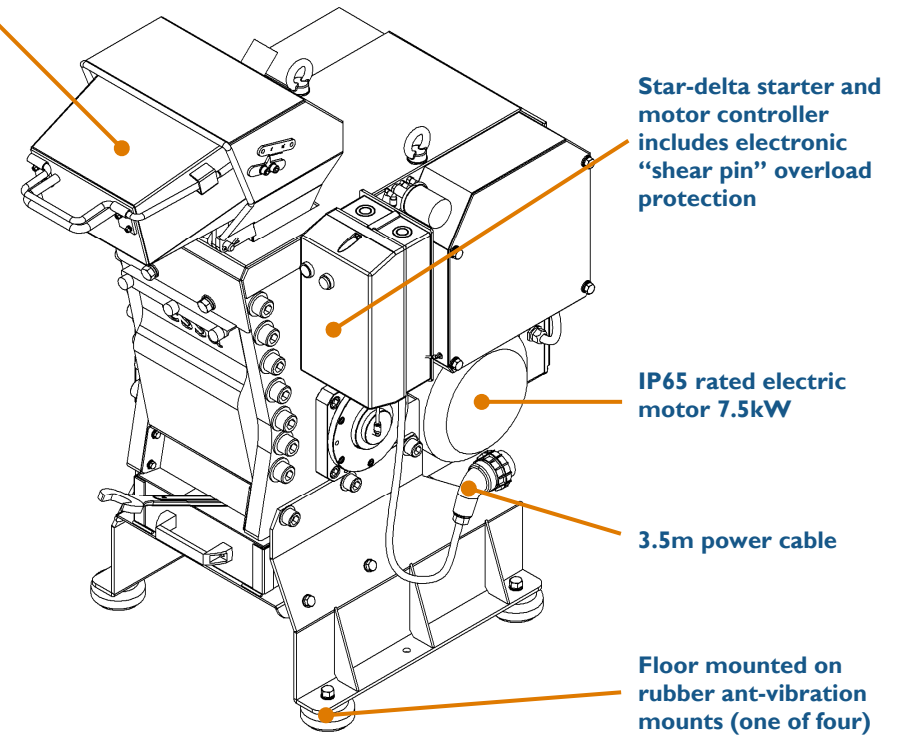
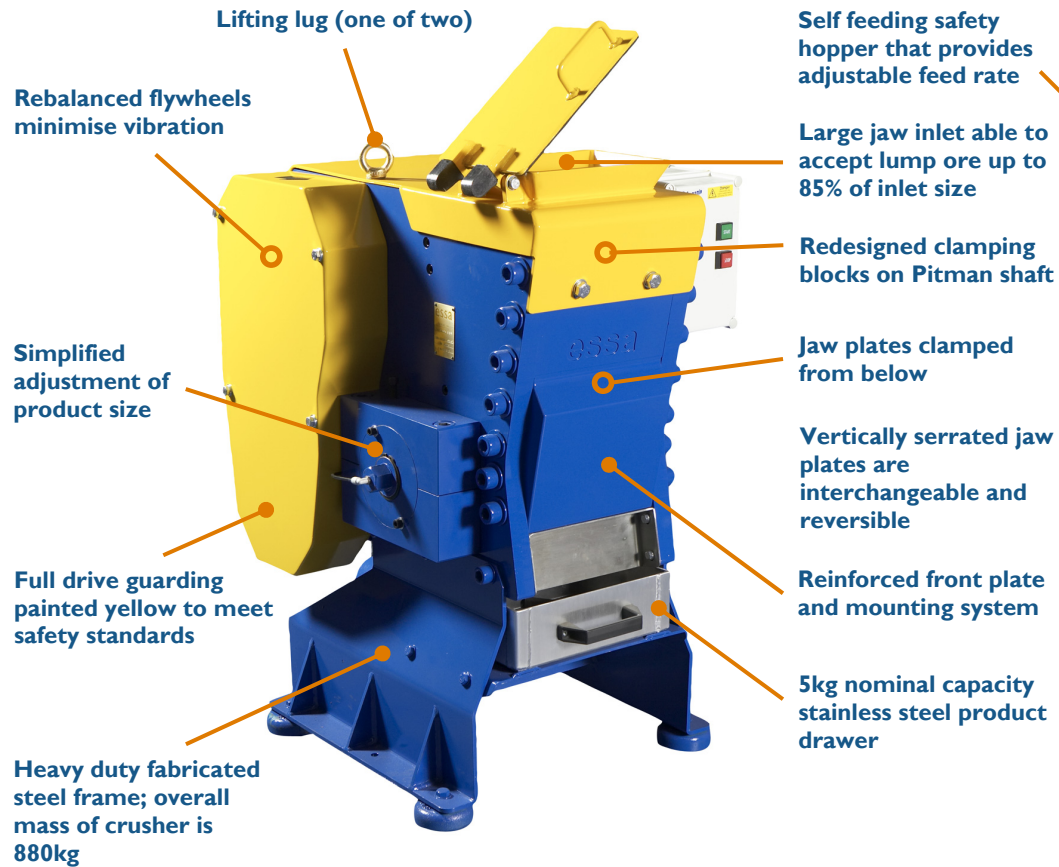


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Technical Data

Jaw Inlet	130mm x 250mm
Maximum Feed Size	110mm i.e. 85% of jaw inlet
Usual Product Size	90% less than 2mm
Maximum Product Size	15mm
Throughput	180kg/hr at usual product size
Dust Extraction Points	Two: one at 100mm and one at 50mm O.D. connection spigot
Dust Extraction Flow	225L/sec
Electrical Requirements (3 phase)	7.5kW
Approximate Mass	880kg (920kg crated)

Please note that the figures quoted above are nominal only performance expectations that can vary according to the physical characteristics of the material being prepared, the condition of the equipment, the gap adjustment and the method of feeding the crusher. Essa Australia are able to conduct tests at their workshop to determine how the sample preparation equipment will perform when processing your material.



JC2500 Self Feeder

A new feature available for the JC2500 is a simple self feeding mechanism. This is an optional extra for standard crushers but is fitted as standard on crusher/sampler systems.

Fitted above the jaw inlet it allows the operator to load the complete sample into the front tilting hopper. The hopper pivots upwards allowing the sample to gradually slide into the crushing chamber by the combined actions of gravity and crusher vibration.

The angle of inclination is adjustable between 3 and 11 degrees depending on the flowability of the material being crushed and the crush rate required.

This mechanism prevents the crusher being choke fed with an excess of fine and/or compactable material that may overstress the crusher.

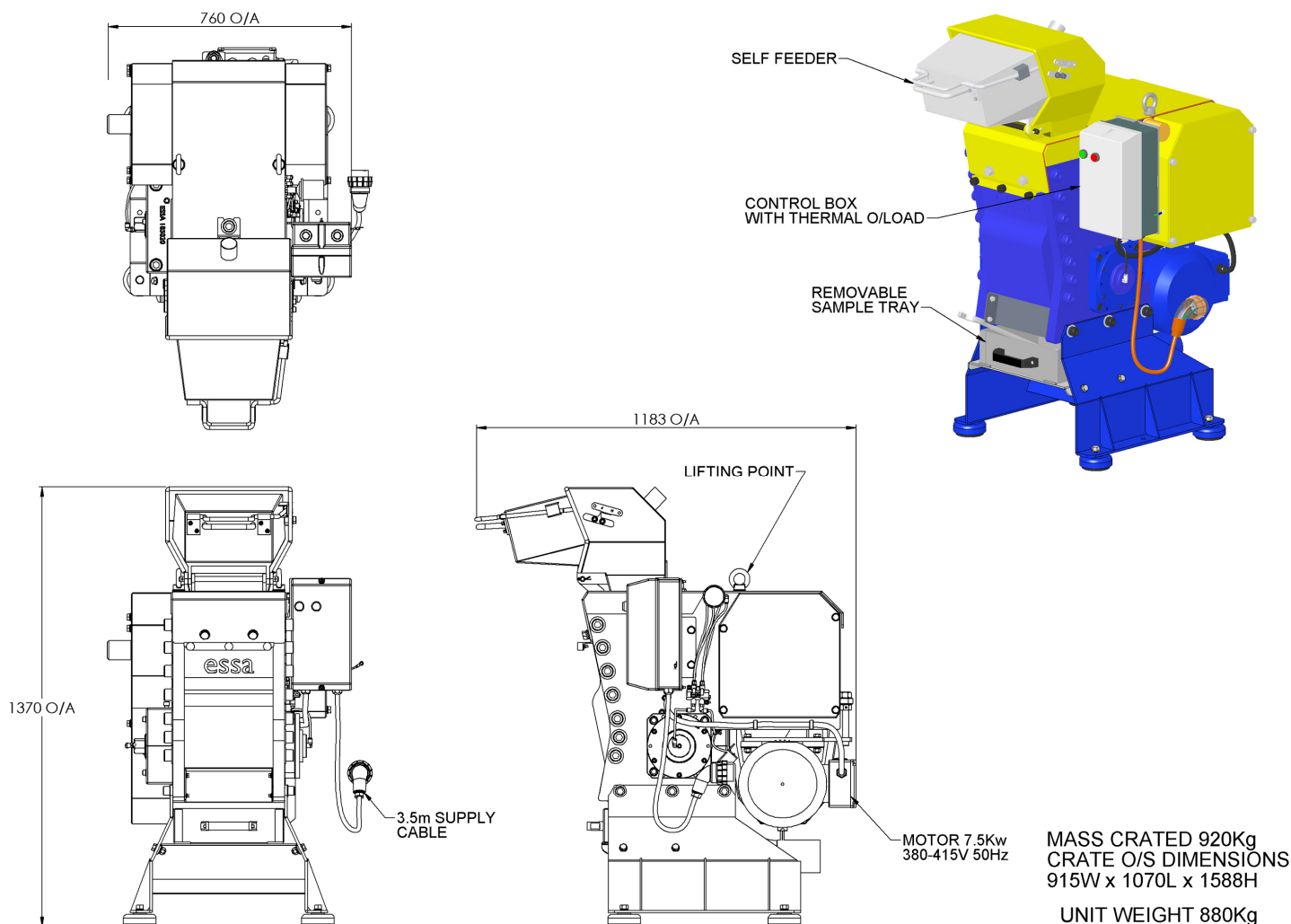
It is important to control feed rates of samples with particle sizes under 40mm when operating at fine jaw aperture settings. A feed rate comparable to the crusher's discharge rate of 20 seconds per kilogram is recommended. This mechanism allows this controlled feed with the added benefit of reducing operator workload.

Simply dump the sample in the hopper, tilt to the desired angle and return to collect the crushed product.

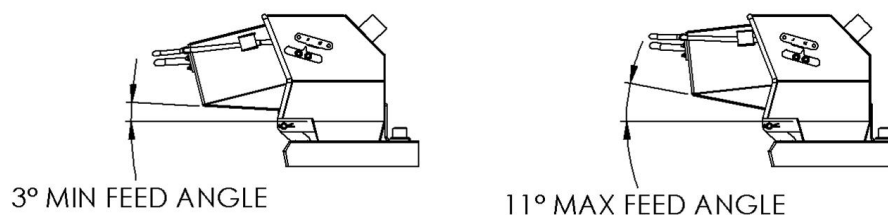
The self feeder mechanism incorporates a dust extraction hood with a 50mm spigot connection to the laboratory extraction system. Operator dust exposure when loading is therefore minimised.

One of the most important features of the self feeder is that it completely prevents operator exposure to the crushing chamber whilst the sample is being crushed. There is no chance of fly rock striking the operator or hands/foreign objects entering the crushing zone.

The complete mechanism (hopper and hood) can easily be unbolted and pivoted away to allow top access to the crushing chamber when the crusher is not operating.



Self Feeding Hopper Indicating Adjustable Feed Rate Angles





JC2500 Arcual Sampler Model ASD

The JC2500 Jaw Crusher can be factory supplied or retrofitted with an optional arcual sampling device.

There are two sampler options:

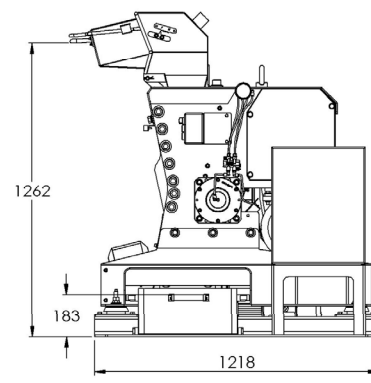
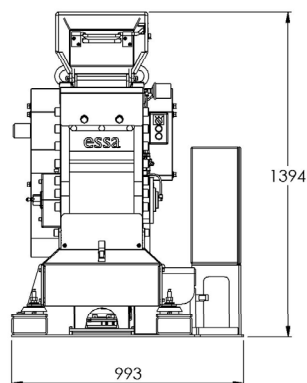
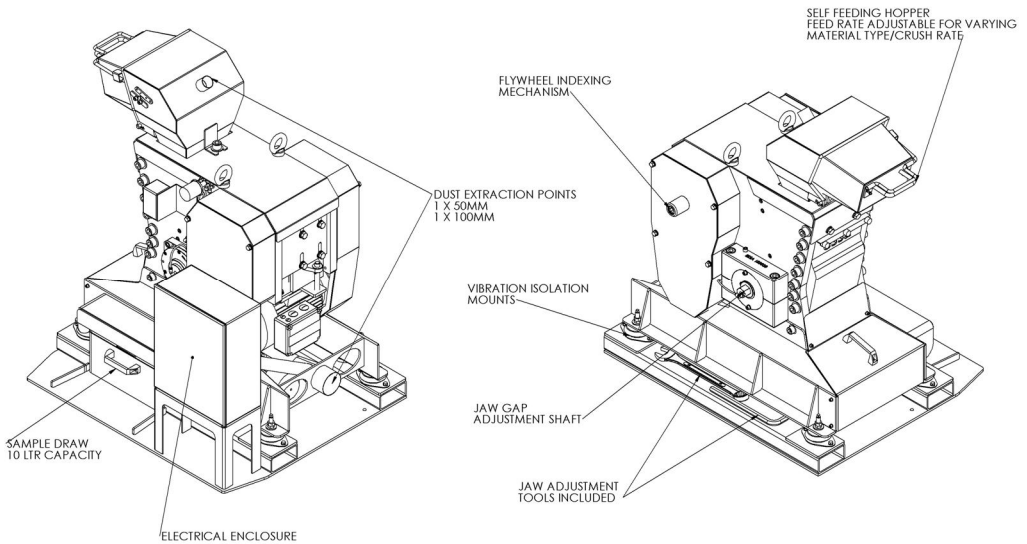
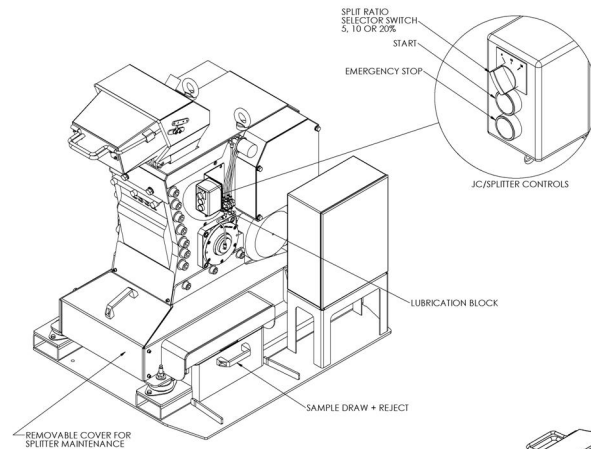
- Model ASD - sample and residue collected in buckets
- Model ASDR - sample collected in sample bucket and residue on to a waste conveyor

The mode of operation of the sampler is very simple yet complies to good sampling practices.

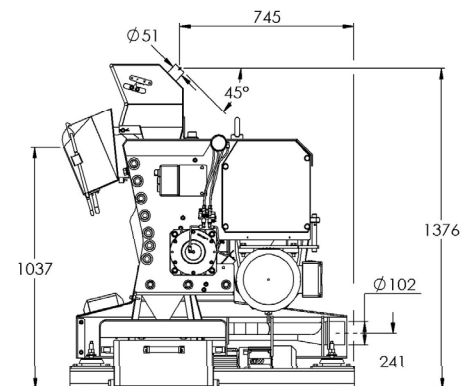
The crushed material falls directly into the sampler hopper. A vibrating feeder tube moves back and forth across a 60 degree arc over the sample drawer.

The sample drawer contains a centrally located segmented sample collection bucket. The residue is collected either side of this sample collection bucket.

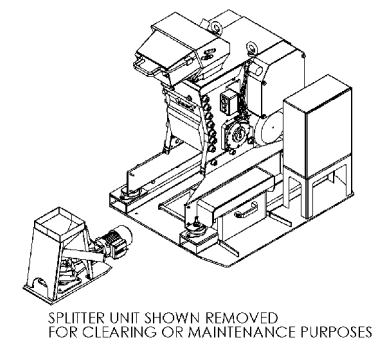
The sampler is PLC-controlled and is factory set to collect either a 5%, 10% or 20% representative split. This split ratio is set using simple selector switch on the control panel. The same sample collection bucket is used irrespective of the split option selected.



SELF FEEDER CLOSED



SELF FEEDER DRAW OPEN



SPLITTER UNIT SHOWN REMOVED FOR CLEARING OR MAINTENANCE PURPOSES



JC2500 Arcual Sampler Model ASDR

The Model ASDR arcual sampler utilises the same principle of operation as the ASD sampler except that the sample is still collected in a segmented sample bucket but the residue falls on to a waste conveyor.

Split ratio options of 5%, 10% and 20% remain the same as the ASD sampler.

If the residue needs to be collected then the ASDR sample drawer can be simply replaced with the ASD sample drawer.

The reject conveyor unit is not supplied as standard with this system. Essa can supply a suitable conveyor to suit your requirements if required.

