



CRUNCH TIME

One of the world's biggest track mounted crushers arriving soon in Australia

One of the world's biggest heavy duty track mounted primary crushers will soon be arriving in Australia.

The unit, being brought to Australia by Rapid Crushing is a Johnsson L160.

This enormous unit, weighing in at roughly 170 tonnes comprises a Johnsson frame fitted with a Metso C160 jaw crusher.

Rapid is the first private contractor to operate one in Australia.

These units, built specifically to order in Sweden are designed to deliver industry-leading crushing performance.

They're fitted with high-quality Metso crushers and can be operated by its own onboard diesel powered generator or electricity from the grid or another power source.

This unit is the ideal mobile solution for open quarries requiring a seriously high capacity, heavy-duty operation.

Glenn Irvine, Rapid's Operations Manager



said the unit will be put to good use when it arrives in Australia.

'We're excited to obtain this machine because it adds to our capacity to deliver what clients want – tonnage produced with absolute reliability at the best price possible.

The unit's fleet number is aptly 'E 747' so it has been appropriately named, 'Jumbo'.

It is optioned with a larger feeder, rear support legs, hopper extension wings and every other option available to be set up to deliver high volume low cost primary crushing.

It adds to our capacity to crush all types of

mineral ores including iron ore, gold and nickel as well as construction materials such as concrete and road aggregates, specialty fill materials, rail ballast, road base, blast stemming and rip rap.

Rapid is currently operating a fleet consisting of the following:

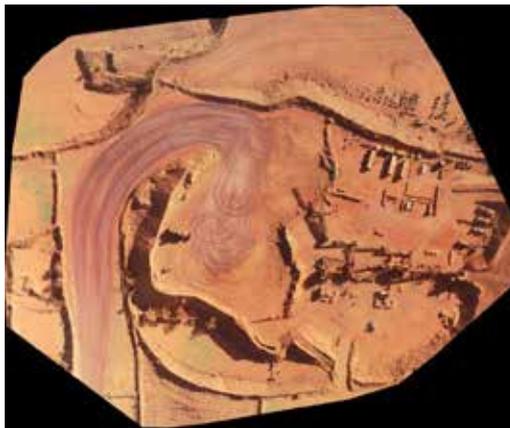
- ▶ Four Track Jaw / Cone & Screen Circuits with the Johnsson about to be added to the line-up.
- ▶ Four Modular Jaw / Cone & Screen Circuits
- ▶ One Fixed Jaw / Cone & Screen Circuit

These aerial shots of crushing and screening plant working at a couple of outback mine sites depict the variation of the country in which Rapid Crushing and Screening Services works.

This leads us to make mention of a very important point when mining companies are calling for quotes.

Because of the major differences in sites a comminution report can result in you having an accurate costing for your project rather than a rough estimate.

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Rapid Dams spreads its wings across the country



New General Manager,
Bernard O'Sullivan

A reorganised Rapid Dams has increased its capabilities and is now taking on projects across the country as

well as being focused on its home base of Western Australia.

Rapid Dams is currently undertaking a major tailings Dams project in New South Wales while at the same time building two tailings dam projects in Western Australia.

General Manager, Bernard O'Sullivan who was recently appointed to expand the operation's capabilities and efficiencies, said Rapid Dams has come a long way since its formative period.

'We're currently undertaking an interesting project in Cobar - a substantial circular, central discharge tailings dam for Glencore's CSA mine,' he said.

This underground copper mine employs 300 people and with an output of 1.1 million tonnes of copper ore, it produces in excess of 185,000 tonnes of copper concentrate per annum.

CENTRAL REVERSE DISCHARGE

'It is a big project as the central reverse discharge system flows into additional discharge ponds. Needless to say it requires really detailed logistical support,' he said.

In addition to this project, Rapid Dams is currently building a tailings dam for Saracen Gold's Carouse Dam Gold Mine near Laverton and another for the Kirkalocka Gold Mine south of Mt Magnet.

Bernard O'Sullivan, an experienced engineering surveyor, and former president of the 'Surveying & Spatial Sciences Institute (SSSI)', also former manager of Survey Results and BOS Civil, a surveying consultancy and a civil construction company, said that in expanding the capabilities of Rapid Dams they had extensively reorganised the company.

New project and site managers have been appointed and the company now has the capability of handling projects of any size – from small to very large.



Making progress at the Kirkalocka Gold Mine

Whilst its principal activities are still the building and refurbishment of tailings dams, the company can undertake mine site rehabilitation work and any earthworks associated with dam construction projects.

He added that mining operations needing any of this type of work done should feel confident in contacting Rapid Dams because the company's capabilities are second to none.

He can be contacted via Bernard@rapidcrushing.com.au or (08) 9452 5888

Contracting rather than D.I.Y. makes more sense!

It's often the case - mining companies sometimes make the decision to purchase their own crushing and screening machinery with the aim of doing the work themselves rather than contracting it – only to regret the decision sometime later.

The reason they so often regret the decision is threefold:

- 1) They have the challenge of finding permanent staff prepared to stay on the job – and what's more, they have the challenge of not just training operational personnel but the people who are to keep the plant operational.
- 2) Purchasing off-the-shelf machinery often limits an operation firstly to the supply of spare parts and service personnel and secondly to the fact that the gear is often not well adapted to Australia's extreme hot and dusty conditions. Because we have a specialist engineering workshop and we have 41 years of practical experience, our plant (even imported machinery), is modified to suit conditions and we're not reliant on outside service personnel being available for service work.
- 3) If increased output is required or the

machinery reaches the point when it has to be replaced or upgraded, mining company's personnel invariably have to research for information, then purchase the plant and wait for it to be installed at the convenience of the supplier. By contrast, a substantial contracting service like Rapid has machinery suited for job expansion so increased output can be met easily or by simply adding another shift or by bringing in other plant from the stable of equipment

we have on hand. Upgrading is never a problem for us.

WE INVITE YOU TO COST IT OUT.

Work out the challenges of keeping and training staff, of maintaining the machinery, upgrading it and replacing it when its capacity is usurped or it has aged and you will come to conclusion like many others that contracting makes better sense.



"Doing it Right"

TO HAVE AN ACCURATE QUOTE: REQUIRES 'COMMUNITION' - (NOT TO BE CONFUSED WITH COMMUNISM)

If there is one thing that we urge mining companies to organise their 'quote-obtaining personnel' to have a handle on when calling for quotes on crushing and screening work, it is the subject of comminution.

Comminution is the process of the particle size of the run of mine ore being reduced via crushing and grinding (and/or milling) to the level required by the customer purchasing the product from the mine.

What a mining company needs most is an accurate quote from its contractors – not something that is 'pie in the sky', likely to be subject to a stream of conditions and changes.

And the way to obtain an accurate quote is to have information that is essential for a contractor to give an accurate quote – and this comes down to key factors that are involved in the comminution process.

When crushing rock, details of abrasiveness, hardness and crushability of feed material indicates throughput needed to meet output targets.

It also indicates likely machinery wear and the best set-up for the job.

SAMPLE OF R.O.M. MATERIAL

So ideally, before calling for a quote, you should have a sample of R.O.M. material tested for four relevant crushing indices: Abrasion Index (Ai); Compressive Strength (CS), Work Index (Wi) and Particle Size Distribution (PSD).

(a) The Abrasion Index (Ai): Quantifies ore abrasiveness to enable likely metal wear rates in crushers and ball consumption in ball mills.

(b) Compressive Strength (CS): Indicates forces for fracturing the rock and the type of primary crushers best suited. Ores with CS values above 180 MPa require particularly robust primary crushers and would probably not be suitable for Semi-Autogenous Grinding (SAG).

(c) Work Index (Wi): Describes ore competency at larger particle size and is used to calculate crusher power requirements.

(d) Feed Material – particle size distribution (PSD): Describes the particle size within the feed stream. Material percentage of each size determines the machine capacity. The more material to pass through a screen, the larger the required screen area for the task. Material top-size directly impacts screening capability.

There are also a couple of more obvious factors needed such as the following:

1. PRODUCTION TIMETABLE

An output timetable assists in determining the optimum plant and whether a double shift operation will be required to achieve targets.

One of the key factors important to be aware of is the type of equipment that the contractor can bring to the site.

Contractors with high capacity machinery such as Rapid can be the better choice to have on site because high capability machinery can mean just a single shift which means fewer personnel – lower costs.

Furthermore, if output requirements increase later, the contractor may be able to meet them by simply adding a shift rather than pulling out machinery and starting up again or doubling on-site plant.

You would be surprised at the number of times Rapid is called in to take over a contract because the initial contractor could not cope with the 'unknown material' that should have been reckoned with in the first place or could not handle the extra volume required.

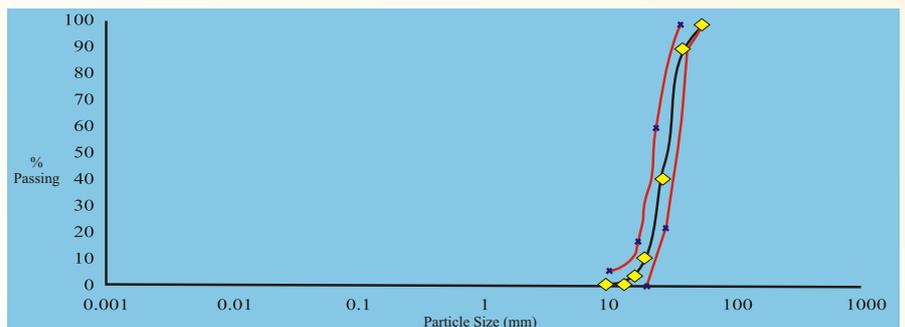


2. INCLUSIONS/EXCLUSIONS

When calling for a tender price always clarify responsibility for fuel, water, staff accommodation, flights etc – in other words who will supply what. Without clarification, the contractor has to guess, leading to quote inaccuracy which then leaves issues for debate.

3. DON'T GO ON PRICE ALONE

If a quote is significantly lower than another, always check machinery capacity because though minimum size plant looks cheaper, if you're going to have a problem-free project, larger plant may avoid double shifts when there are project delays. Plant capacity makes quote evaluation difficult, but essential.



Sieve Size (mm)	% Passing
53.0	100
37.5	91
26.5	41
19.0	11
16.0	4
13.2	1
9.5	1
6.7	--
4.75	--

Sieve Aperture (mm)	Mass of sample passing (%)
53	100
37.5	90 to 100
26.5	20 to 55
19	0 to 15
9.5	0 to 5

Crushing is not just the breaking of rocks as there is a great deal of expertise in meeting often stringent specifications. To satisfy specs relating to sizes and grades there are the comminution factors to take into account as different materials need to be treated differently. What sets Rapid apart as crushing contractors is our ability to take on the difficult jobs to satisfy stringent specifications – often not able to be done by other plant operators. The above specs are typical of what we can achieve and for those in the know - not possible by many others.

Can you really afford to gamble with your mine-site's production reliability?

Mining companies turn to the Rapid Group for absolute production reliability

Crushing & Screening Work

We offer lowest possible tonnage costs

The highest production targets & standards

Achieved by:

- Our plant being tailor designed to your site and output needs
- It ensures maximum efficiency!
- With bases in WA and Qld we've got you covered!



Tailings Storage Facilities

Quality workmanship guaranteed

- Wet & dry lift tailings storage facilities
- Clay & HDPE & PVC lined ponds (any size)
- Dam extensions
- Road construction
- Rehabilitation earthworks

Take out the gamble...to discover how you can have the most reliable service in meeting your needs

Tel: (08) 9452 5888



"Doing it Right"



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