# CASE STUDY

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Humma 55-tonner is aimed at the mining and heavy construction industries.

## The largest articulated pick-and-carry crane in the world with its lifting capacity of 55 tonnes, has been developed by Perth-based DRA Engineering.

The Cummins-powered 55-tonner is a further development of DRA's Australian designed and manufactured Humma range which started with an 18-tonne lift capacity model in 1996.

"We've broken new ground," says Peter Dalla Riva (Jnr), manager of DRA's crane and engineering division, noting that the new Humma 55T had been three years in development.

With the release of the 55T, DRA has pumped around \$14 million into R&D for the Humma range, the company proudly claiming it is the only manufacturer with a 100% made-in-Australia range of articulated pick-and-carry cranes.

### Automatic levelling suspension.

The latest Humma, aimed at the mining and heavy construction industries, is packed with innovation, including a dynamic hydraulic suspension which automatically levels the crane during lifting. This allows it to operate on side slopes up to 5 degrees without the need to derate its safe working load. DRA notes that out-of-level lifting is the biggest safety concern and cause of the majority of crane incidents. Even lifting on level ground can put the crane into an out of level condition due to tyre deflection. Existing solutions rely on operator ability to derate the crane's capacity from a chart or travel a pre-determined route to check the slope conditions.



Humma's dynamic hydraulic suspension automatically levels the crane during lifting.

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The DRA designed and manufactured Humma cab is impressively equipped. Directly in front of the operator are dual 305 mm colour touchscreen displays for crane LMIs (load moment indicators); diagnostics; crane, winch and travel hours logged for accurate crane life history; and a host of other information. Crane control is via joystick with winch speed and creep speed buttons.

The two-axle Humma 55T is road registerable and is capable of 85 km/h, meaning it can be moved from site to site with ease. Cummins stays put in Humma.

The hummin' in the new Humma is the Cummins ISC engine rated at 285 hp. In fact, the 8.3-litre ISC has powered the Humma since day one.

"Having been in the construction industry for years, we were well aware of the Cummins product and the fact it was more reliable and better performing that other brands," says DRA's operations director Peter Dalla Riva (Snr), discussing the reason for the Cummins preference.

"We also knew that Cummins was well represented around Australia, with a very good reputation for service support. "The competition has tried hard to get their engines into the Humma but we've seen no reason to change from Cummins."

Dalla Riva points out that Cummins' strong profile in the mining industry – a target market for the Humma 55T – is another reason for the Cummins product preference.

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Top left: Cab is impressively equipped. Top right: (from left) Geoff Ironmonger and Troy Drysdale (Cummins Perth) with Peter Dalla Riva (Jnr) and Peter Dalla Riva (Snr). Bottom left: The entire manufacturing/assembly of the Humma range is carried out at DRA's engineering facility in Jandakot, Perth.

The entire manufacturing/assembly of the Humma is carried out at the company's engineering facility in Jandakot, Perth. The cab, chassis, booms and tanks are all manufactured in-house. "We use local steel so we know that the quality is to our specification," says Peter Dalla Riva.

He considers R&D critical to specifically meet Australian market requirements. "If you don't do R&D you won't survive," he says, reiterating that DRA has spent millions of dollars on R&D for the Humma range. "We're already thinking of our next Humma step… perhaps to 75 or 10 tonnes capacity."

The company continues to build its 25 and 35-tonne capacity Humma cranes.

DRA was founded in Melbourne in 1972 by Peter Dalla Riva (Snr). The company was involved in the construction industry and for many years had plants and offices in Melbourne, Adelaide, Darwin and Perth. In 2000, DRA, with its expanded engineering activity, decided to concentrate on its business in Perth.

DRA had earlier acquired Construct Engineering which specialised in abattoir design, conveyors, robotics, and turn-key automation systems for the food processing, mining, chemical and manufacturing industries. DRA recently built a \$6 million plant for the construction of industrial fuel tanks with capacities up to 200,000 litres.



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