



CHRISTMAS CREEK MINE, WA, AUSTRALIA

CASE STUDY

## **Australia's first Alimak industrial elevators installed on an iron ore crushing plant**

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**ALIMAK**

# CHRISTMAS CREEK MINE, WA, AUSTRALIA

## Australia's first Alimak industrial elevators installed on an iron ore crushing plant

Crushing Services International specifies three Alimak SE 1200 kg industrial elevators for inclusion on the Christmas Creek Mine expansion. Installed in the mine's iron ore processing facilities, these are the first permanent Alimak elevators in Australia installed on an iron ore crushing plant.

### IRON ORE MINING EXPANSION

Fortescue Metal's Christmas Creek mining operations has undergone a two phase expansion program to increase the capacity of the mine's iron ore operations. Located in the east Pilbara region of Western Australia, the Christmas Creek mine expansion included the construction of two ore processing facilities and a crushing hub; the first in Australia to be fitted with Alimak industrial men and materials elevators.

Completed in December 2012, the expansion has increased production to more than 50 million tonnes of ore per annum.

### MINIMIZING PLANT DOWNTIME

As the prime contractor for the expansion's construction works, Crushing Services International specified the inclusion of the elevators in the ore processing facilities in order to maximize plant reliability. Minimizing production downtime at the processing facilities was a critical factor, as the iron ore requires crushing, screening and processing prior to sale and transport.

Used for the transportation of materials, equipment and the operations and maintenance personnel on site daily, the three Alimak SE 1200kg industrial elevators improve efficiency of operations at a key stage of the mine's processing circuit.

### PHASE ONE: TAKING ADVANTAGE OF LIMITED SPACE

Phase one of the expansion involved the construction of a 20mtpa ore processing plant, used to crush, screen, scrub and de-sand the wet table ore. The first Alimak industrial elevator was installed in the de-sands building of the processing plant in March 2011, and required careful engineering to fit the elevator system inside an existing portion of the building's structure. In order to take full advantage of the limited space available, an Alimak FE mast was selected for its narrower depth and smaller dimensions, in place of the standard Alimak 650 mast.



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## PHASE TWO: A SECOND AND THIRD ELEVATOR ARE INSTALLED

Phase two of the expansion included the construction of a second ore processing plant and a remote crushing hub. The second Alimak 1200kg industrial elevator was installed in the facility's tertiary crusher in May 2012, while February 2013 saw the final Alimak elevator installed in Plant 2's de-sands building.

## IMPROVING SAFETY AND EFFICIENCY ON SITE

The Alimak SE 1200kg personnel and materials elevator was selected for all three buildings due to its flexible size. With a car size of 1.3 m x 2.1 m, the Alimak SE 1200 is suited to carry palletized loads and improves safety and emergency procedures on site by accommodating the dimensions of an emergency stretcher.

### ELEVATOR DETAILS

Location:	Christmas Creek Mine, Western Australia
Product model:	Alimak SE 1200
Elevator type:	Rack and Pinion
Application:	Iron ore processing facility, elevator access
No. of elevators:	3
Capacity:	1200 kg
Car size:	1.3 m x 2.1 m
Speed:	0.6 m /sec



Christmas Creek Mine, WA, Australia

*Alimak is a global market leader and pioneer in the design and manufacture of vertical access solutions for industrial and construction industries. The company provides high quality rack and pinion and traction elevators, construction hoists and work platforms. Alimak has a well-established global sales, service and distribution platform across more than 90 countries with strong market presence. The company has a large global installed base of over 23,000 units which provides unique know-how of all industrial application areas. Alimak was founded in 1948 and employs over 1,200 people across the world. Alimak is part of Alimak Group which is headquartered in Stockholm, Sweden.*

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