



JOY MINING MACHINERY
A Joy Global Inc. Company



JOY BROADBAND **Long Life Chain**

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JOY BROADBAND Long Life Chain



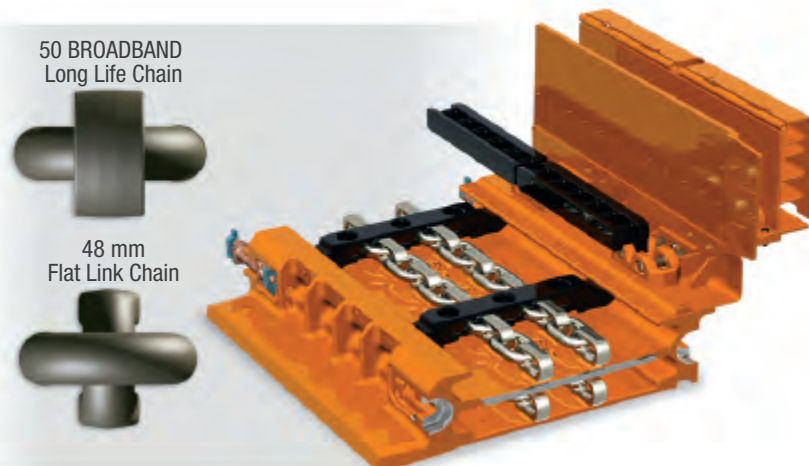
JOY BROADBAND long life chain provides proven extended wear resistance without detriment to chain weight and conveying characteristics, delivering new levels of chain conveying efficiency and reduced operating cost. First installed in 2004, over the last five years the chain has conveyed over 80 million tonne on AFC & BSL applications in high productivity longwall installations operating in many major markets.

With improved chain life, this innovative product is consistently pushing the boundaries on extended chain life, with operators planning larger block sizes. JOY BROADBAND long life chain provides the greatest opportunities to longwall operators planning their future developments or upgrade requirements.



Lower Line Pan Profile

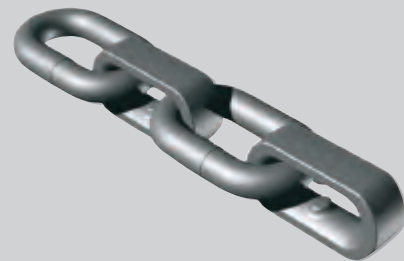
JOY BROADBAND long life chain provides the lowest longwall equipment per kW of installed power across the range of high efficiency longwalls. Its small envelope size facilitates lowest height linepans providing valuable height savings in low seam applications, improves shearer tunnel clearances and conveyor loading ability, and adds flexibility to the haulage track position.



Increased Production

More Tonnes...

The JOY BROADBAND long life chain is comprised of forged low height vertical links connected by welded round wire horizontal links manufactured in the traditional way for mining chain. Solid modelling techniques and integrated Finite Element Analysis were used to develop an improved longwall chain that provides lower wear rates with a geometry that resists chain knuckling.



Greater Installed Power

With the Joy 3000 series gearboxes, JOY BROADBAND long life chain provides for the largest longwall operations and highest installed powers. A gateway to improved productivity, through increased hourly capacity, longer face lengths also reduce roadway development time and costs, thus providing a safer longwall operation.

Size (mm)	Installed Powers (Typical)
42 BROADBAND long life chain	2 x 1050 kW
50 BROADBAND long life chain	3 x 1000 kW
56 BROADBAND long life chain	3 x 1600 kW



Cost Benefits

Lowest cost per tonne...

JOY BROADBAND long life chain, brings the end user cost benefits through reduced systems' costs for comparable powered conventional systems, reduced operating costs through longer faces, or increased clean coal yield. These benefits align with Joy Mining Machinery's objective to allow its customers to produce coal at the lowest possible cost per tonne over the life cycle of the equipment.



Features and Benefits

Proven Technology for Growth...

Low Profile Vertical Link	Retro-fitted to existing pan lines • Provides upgrade path at minimum cost Minimal change to drive frames • Used in relatively low seam applications requiring high installed powers
Large Interlink Contact Area	Reduced contact wear
Larger Chain Size	Higher installed powers without larger pans
Upgrade Path	42mm Flat Link Chain (2 x 1050 kW) upgrade to size 50 (3 x 1000 kW) 48mm Flat Link Chain (3 x 1000 kW) upgrade to size 56 (3 x 1600 kW) 50 BROADBAND long life chain (3 x 1000 kW) upgrade to size 56 (3 x 1600 kW)