

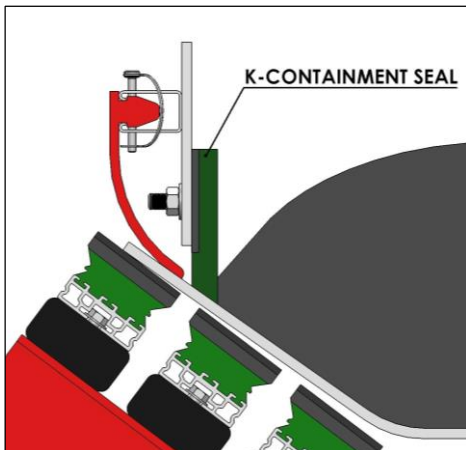
CASE STUDY: K-Containment Seal

Kinder Australia product:	K-Containment Seal
Product category:	Conveyor Skirting & Sealing
Location:	Southern New South Wales
Conveyed materials:	Hard Rock / Granite
Installation date:	February 2013

Previous problem:



Above: photo of K-Containment Seal installed.
Below: cross-section diagram showing proximity of K-Containment Seal to the conveyor belt.



Our customer operates a highly abrasive hard rock quarry in the southern tablelands region of New South Wales with the capacity to produce 5 million tonnes per year.

Keen to find a better solution to the cost of regularly replacing skirting, involving maintenance time costs, schedule shutdown costs, as well as the actual skirting product replacement costs, our customer prepared the following financial comparison in preparation for a trial of K-Containment Seal:

Conveyor 1:

- Previously every month, the existing skirting had to be replaced to both sides of the conveyor.
- It took 2 people approximately 1 hour.
- Also the skirting needed to be lowered fortnightly. This took 2 people 15 minutes.
- Prior to the trial, the calculations confirmed that it took 2 people 2.5 hours a month to maintain conveyor 1.

Conveyor 2:

- Previously every week, the skirting had to be replaced to both sides of the conveyor.
- It took 2 people approximately 1 hour.
- Prior to the trial, it was calculated that it took 4 hours a month to maintain conveyor 2.

Clean Up:

- Due to the spillage caused from the previous skirting it took 1 person approximately 45 minutes a day to hose off the slab under the conveyors. It took 1 person a total of 15 hours a month.



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Kinder Australia Pty Ltd

26 Canterbury Road, Braeside VIC 3195
PO Box 1026, Braeside VIC 3195

☎ +61 3 8587 9111
📠 +61 3 8587 9101

✉ conveyorsolutions@kinder.com.au
ABN: 28 006 489 238

CASE STUDY: K-Containment Seal

Previous problem (continued):



Total labour costs:

- 28 hours @ \$50 per hour = \$1400 per month in labour

Total skirting replacement costs (@\$16 per metre):

- Conveyor 1: 13 metres = \$208
- Conveyor 2: 4 metres x 2 times per month = \$128
- Total expenditure = \$336 per month.

(Plus increased risk of manual handling incident while hosing or changing skirts.)

TOTAL INVESTMENT: \$1736 per month

Resolution:

K-Containment Seal

Key Benefits:

- Heavy duty internal skirt
- Contains spillage reliably at the loading high pressure points
- Longer lasting wear life over quality rubber skirting/steel liner
- Reduces maintenance and labour costs

K-Containment Seal

Key Features:

- Combined with steel backing for extra strength
- Slotted panel allowing for easy adjustment

Our customer decided to trial the K-Containment Seal on Conveyor 2 first, as it only needed 2 panel lengths to seal the belt. As each panel cost \$450, in the initial investment in the trial of the longer lasting polyurethane skirt was \$900. The initial set up of the K-containment Seals took 2 people 2 hours; using the same labour cost calculations as previous it was just \$200, with a further anticipated \$50 (30 mins) for adjustments for the month ahead.

TOTAL TRIAL INVESTMENT: \$1150 for the first month

10 months later and the same K-Containment Seals are still in operation. They have not needed replacing – saving our customer product replacement costs as well as the labour costs involved in their change out. Production has also not been compromised as no shutdowns have been required and the new seal works effectively with the existing rubber skirts. Finally, the risk of associated manual handling incidents has been eliminated.

Due to the effectiveness of the K-Containment Seal in reducing spillage, the customer has also experienced a significant reduction in the costs spent daily on labour for hosing off the slab under the conveyors daily.

Overall our customer has calculated **savings of \$12,500 since installation** of the K-Containment Seals 10 months ago. Now Conveyor 1 also has these skirts.



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