IOM - K-Shield Dynamax® Impact Belt Support System

Kinder Australia Product	K-Shield Dynamax® Impact Belt Support System
Product Category:	Impact Load Zone Belt Support
Issue Date:	31-07-2025
Revision:	2

Overview

The K-Shield Dynamax® Impact Belt Support System is engineered to provide optimal belt support beneath conveyor transfer points, safeguarding the belt from premature failure caused by pinch point damage. Designed for heavy-duty applications where high-impact loading is expected, the K-Shield Dynamax® Impact Belt Support System is improved from traditional static impact belt support by incorporating a damped centre through panel. This dynamic feature allows the cradle to absorb and dissipate energy more effectively, reducing stress on the belt and extending its operational life.

Disassembly Procedure

The K-Shield Dynamax® Impact Belt Support System is supplied fully assembled to ensure all components are correctly aligned and pre-tensioned. However, partial disassembly is required to facilitate installation at the designated location within the conveyor system.

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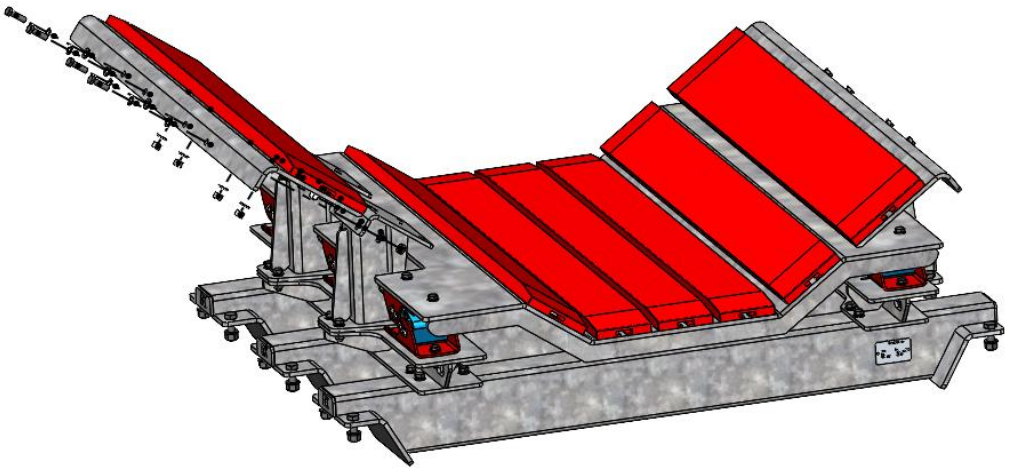
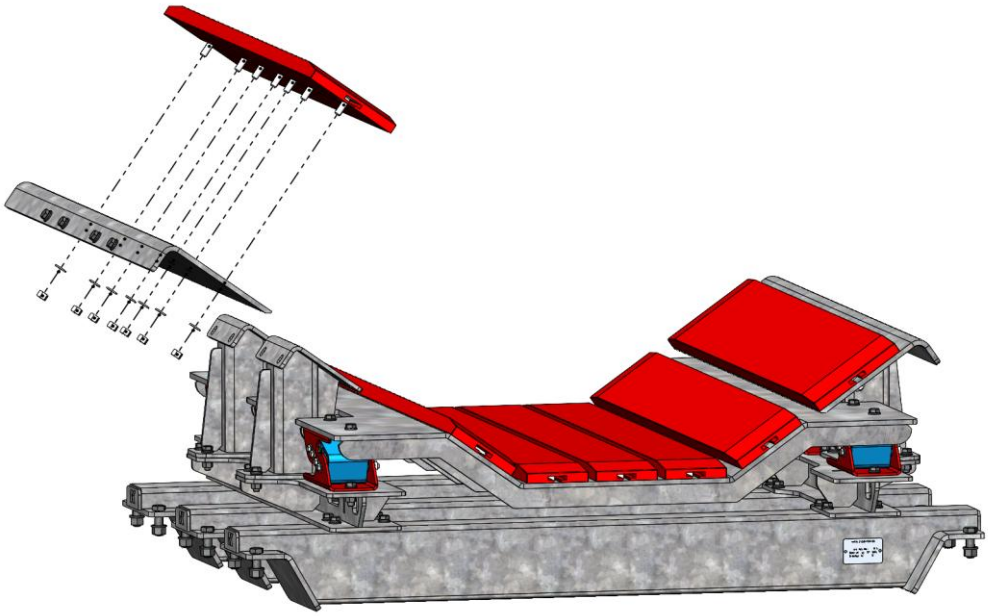
The following procedure outlines the recommended steps for disassembly.

1. Remove the M12 fasters securing the static wing support plate. Detach the static wing support plate along with the slider rail from the cradle frame.



2. The slider rail can then be replaced by loosening the M12 hexagon nuts and sliding out the rails or removing by simply removing the T-bolts and slider rail together.



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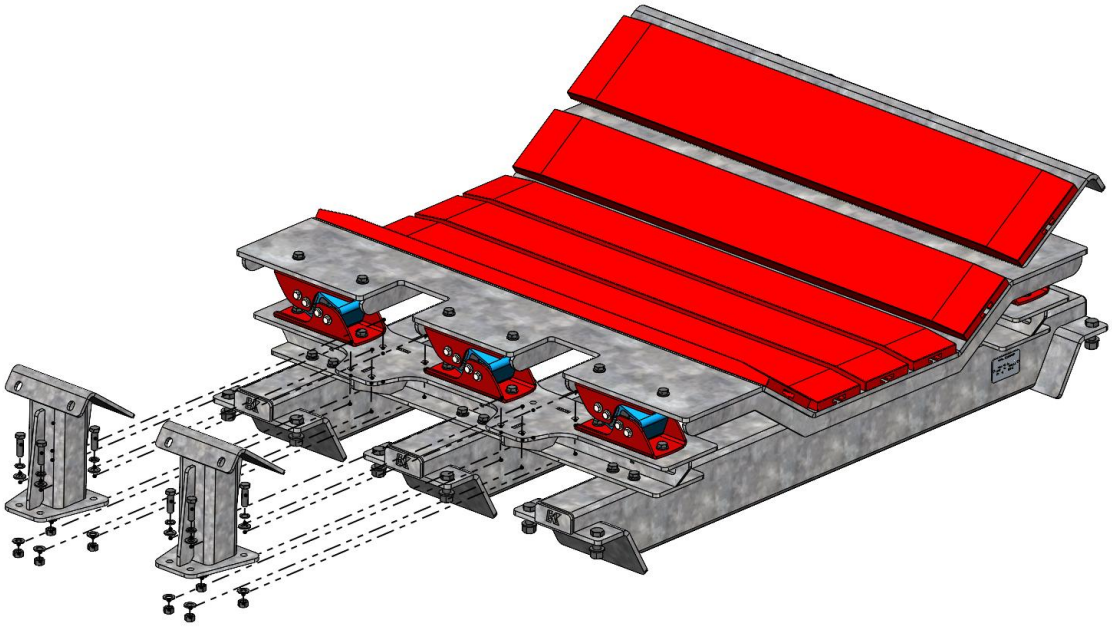
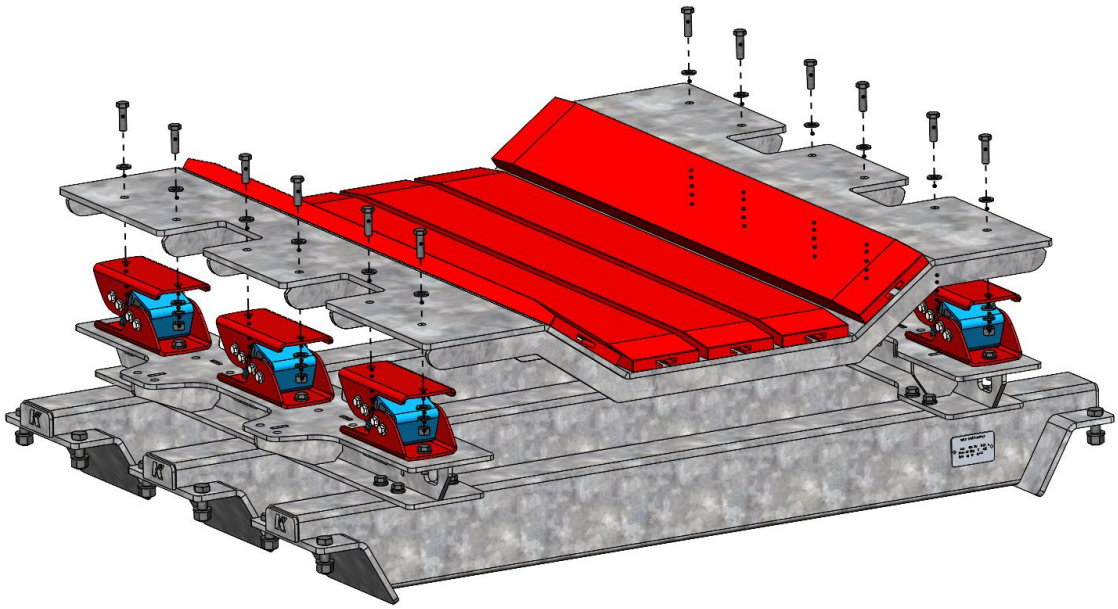
3. Wing support stools can be extracted by removing the four (4) M12 fasteners holing each stool in place.



4. Remove the top fasteners securing the trough panel to the anti-vibration mounts. **Important:** Before proceeding with further disassembly. Use lifting slings or support the panel from underneath using the transoms as stable support points. Use lifting slings or support the panel from underneath using the transoms as stable support points.



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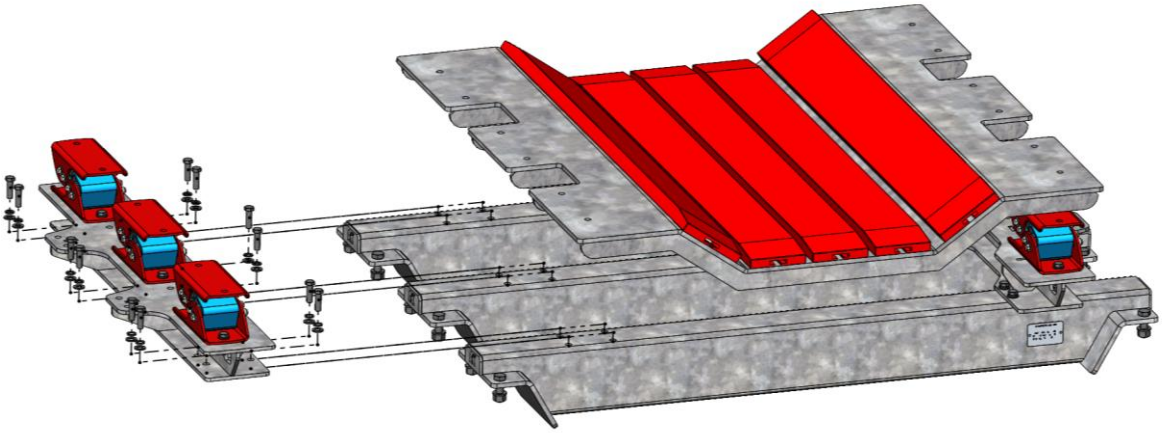
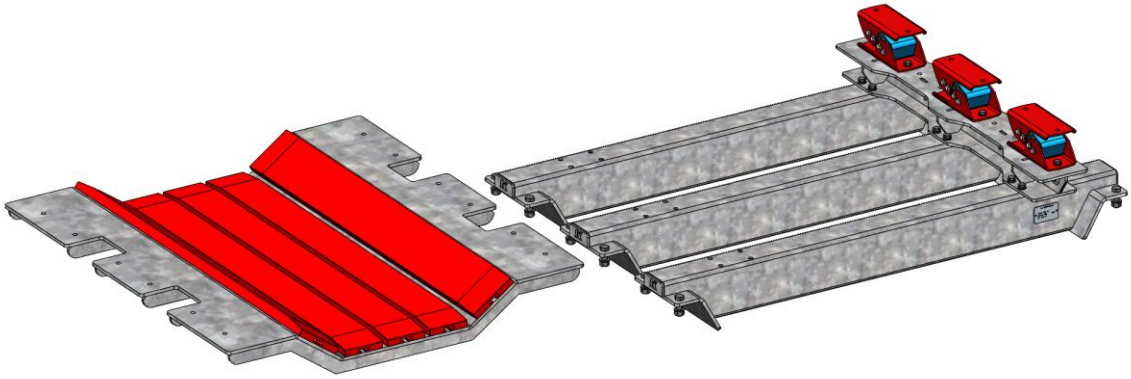
5. With the trough panel supported (as per step 4) remove the fasteners connecting the support rail to the transoms. The support rail along with the anti-vibration mounts can then be removed.



6. With all supporting components removed, the trough panel can now be safely moved



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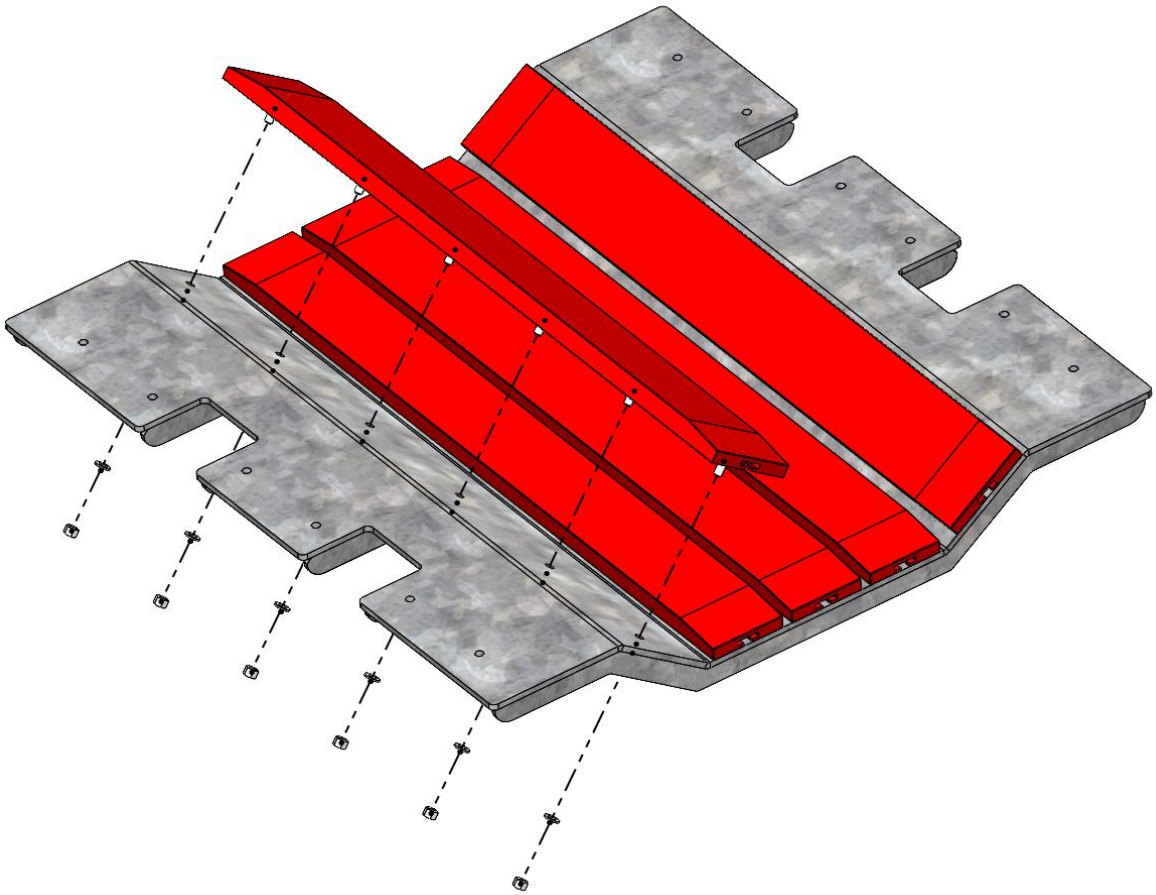
7. Slider rails can be taken off by removing the M12 T-Bolt nuts.



Assembly Procedure

K-Shield Dynamax® Impact Belt Support System are supplied fully assembled. If practical the cradle can be bolted into the desired location without disassembly. Partial disassembly of the cradle may facilitate easier installation then refer to disassembly procedure.

If the cradle has been completed disassembled, the correct spacing of the transoms can be found on the general arrangement of the specific K-Shield Dynamax® Impact Belt Support System or this can be measured from the hole spacing on the support rails. As each unit is design specifically for the application, check the drawing number on the ID tag located of one of the transoms matches the general arrangement drawing.

Reassembly should be performed in reverse order, ensuring that all fasteners are correctly tensioned to the specifications outlines in the table. Torque setting assumes class 8.8 zinc plated fasteners that are dry (unlubricated).

Fastener Size	Torque
M8	25 Nm
M10	50 Nm
M12 (including Slider rail T-bolts	90 Nm
M16	215 Nm

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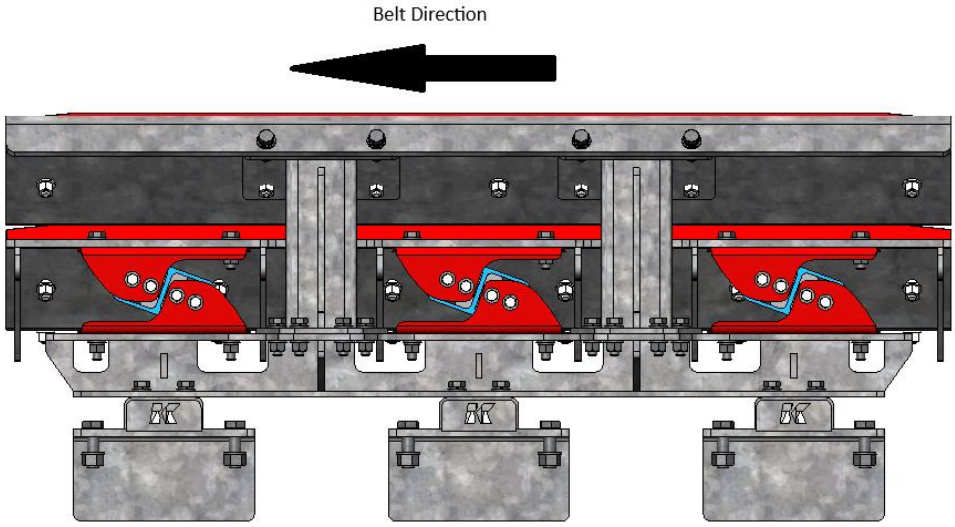
Installation Orientation

Proper orientation of the K-Shield Dynamax® Impact Belt Support System relative to the conveyor belt direction is critical, as dictated by the mechanical function of the anti-vibration mounts.



Storage

The slider rails are made from a low-friction engineering plastic, which is relatively soft and susceptible to mechanical damage.

The trough panel is suspended on anti-vibration mounts that incorporate rubber elements, which can degrade or deform under excessive load.

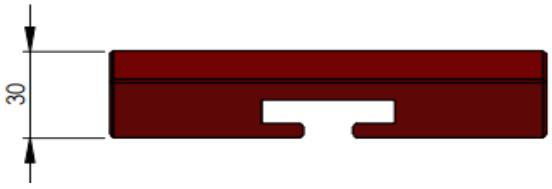
Do not stack heavy objects on the system during storage or handling. Doing so may cause permanent damage to the slider rails and anti-vibration mounts, compromising system performance.

For best results, store the system in a dry and protected area, away from direct sunlight, moisture.

Maintenance

Slider Rails

Monitor Slider rail wear at least every 1 month. The minimum thickness of slider rails is 18mm. Replace slider rail when wear has reached this thickness. Refer to disassembly procedure for slider rail replacement.

Original Height	Replacement Height
	

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Below is the list of part numbers of standard replacement slider rails. Generally, the standard rails are red colour and high speed/high capacity Glideshield slider rails are dark grey in colour. Some cradles may use a combination of standard and Glideshield rails.

Part No.	Description
K-SUP-DIB100x1200x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 100 WIDE x 1200 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB100x1500x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 100 WIDE x 1500 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB125x1200x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 125 WIDE x 1200 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB125x1500x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 125 WIDE x 1500 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB150x1200x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 150 WIDE x 1200 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB150x1500x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 150 WIDE x 1500 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB175x1200x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 175 WIDE x 1200 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB175x1500x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 175 WIDE x 1500 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB200x1200x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 200 WIDE x 1200 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB200x1500x30	K-SLIDER RAIL - 7000 SERIES MATERIAL - 200 WIDE x 1500 LONG x 30 THICK - TAPER ON BOTH ENDS
K-SUP-DIB100x600-HS	K-SLIDER RAIL - GLIDESHIELD MATERIAL - 100 WIDE x 600 LONG x 30 THICK - TAPER ONE END ONLY
K-SUP-DIB125x600-HS	K-SLIDER RAIL - GLIDESHIELD MATERIAL - 125 WIDE x 600 LONG x 30 THICK - TAPER ONE END ONLY
K-SUP-DIB150x600-HS	K-SLIDER RAIL - GLIDESHIELD MATERIAL - 150 WIDE x 600 LONG x 30 THICK - TAPER ONE END ONLY
K-SUP-DIB175x600-HS	K-SLIDER RAIL - GLIDESHIELD MATERIAL - 175 WIDE x 600 LONG x 30 THICK - TAPER ONE END ONLY
K-SUP-DIB200x600-HS	K-SLIDER RAIL - GLIDESHIELD MATERIAL - 200 WIDE x 600 LONG x 30 THICK - TAPER ONE END ONLY

Both standard and Glideshield slider rails are secured to the cradle using T-Bolts, kinder part number K-FAS-T-BOLT M12x40.

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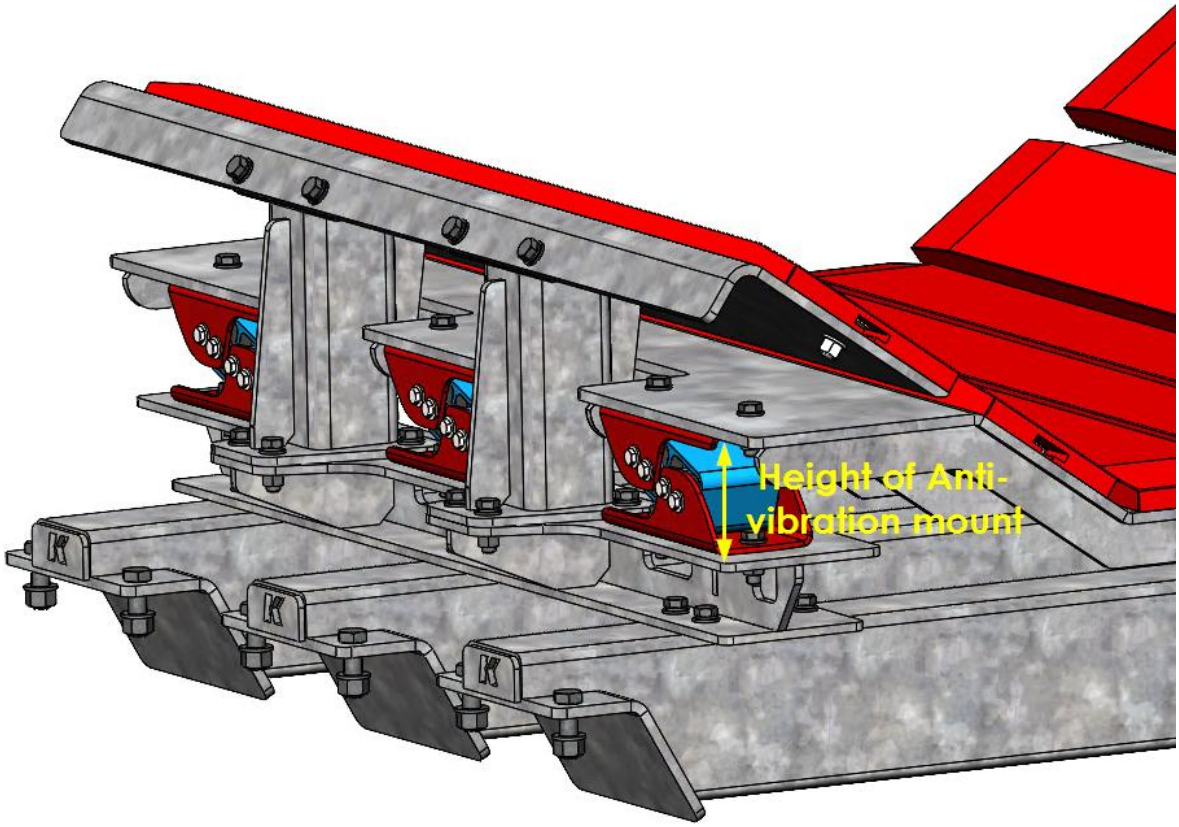
Anti-Vibration Mounts

The anti-vibration mounts in the K-Shield Dynamax® Impact Belt Support System are subject to a phenomenon known as cold flow. Cold flow refers to the gradual sagging or reduction in height of the rubber elements over time due to long-term mechanical loading, even when the applied load is well below the material's maximum strength.

To maintain optimal system performance:

- Regularly measure the height of each anti-vibration mount during scheduled inspections.
- If the measured height is less than the minimum replacement height specified in the table below, the mount must be replaced.



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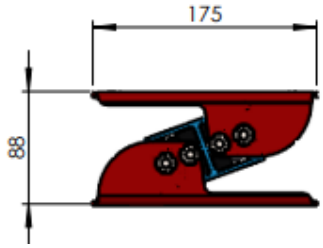
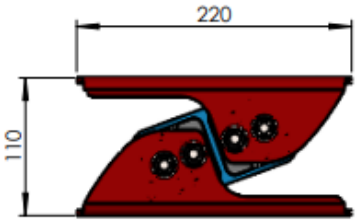
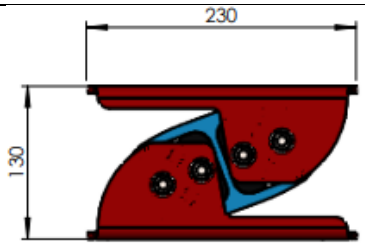
Part No.	Reference Diagram	Original Height	Replacement Height
K-IMP-CRA-KTE-27X60		88mm	68mm
K-IMP-CRA-KTE-38X80		110mm	80mm
K-IMP-CRA-KTE-45x100		130mm	95mm
K-IMP-CRA-CTE-04		143mm	110mm
K-IMP-CRA-AVM-03		88mm	68mm
K-IMP-CRA-AVM-04		117mm	91mm
K-IMP-CRA-AVM-05		143mm	110mm

Refer to disassembly procedure for anti-vibration mount replacement.

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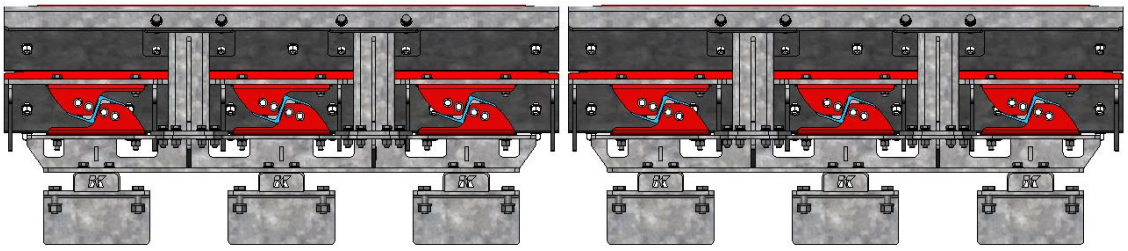
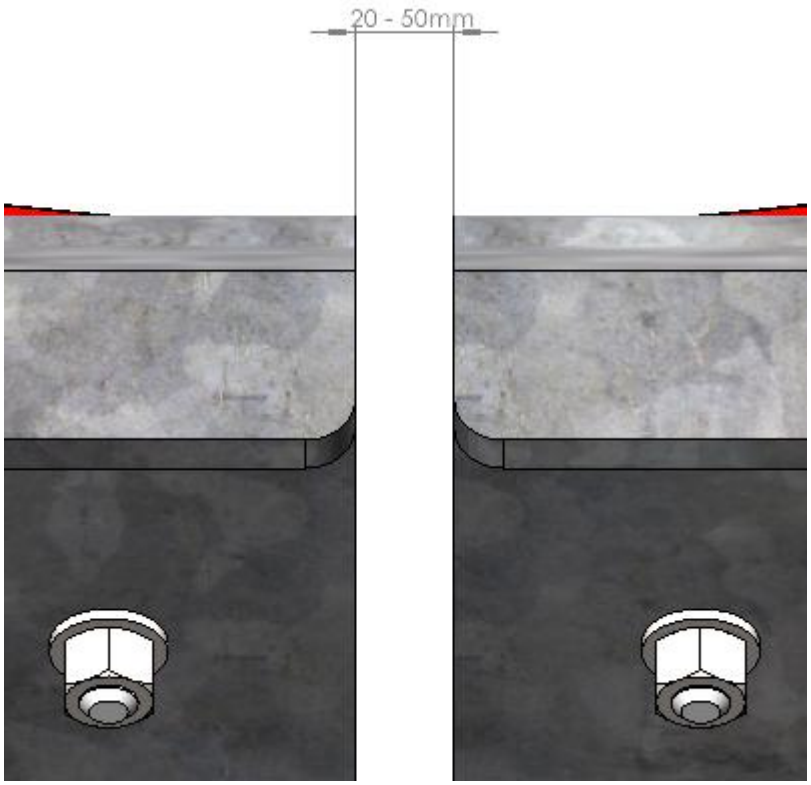
Back-to-Back Installations

Because of the operating characteristics of the anti-vibration mounts, the K-Shield Dynamax® Impact Belt Support System may experience lateral displacement when subjected to load. To mitigate the risk of mechanical interference between adjacent units, a clearance of 20-50 mm between the beds shall be maintained during installation.





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