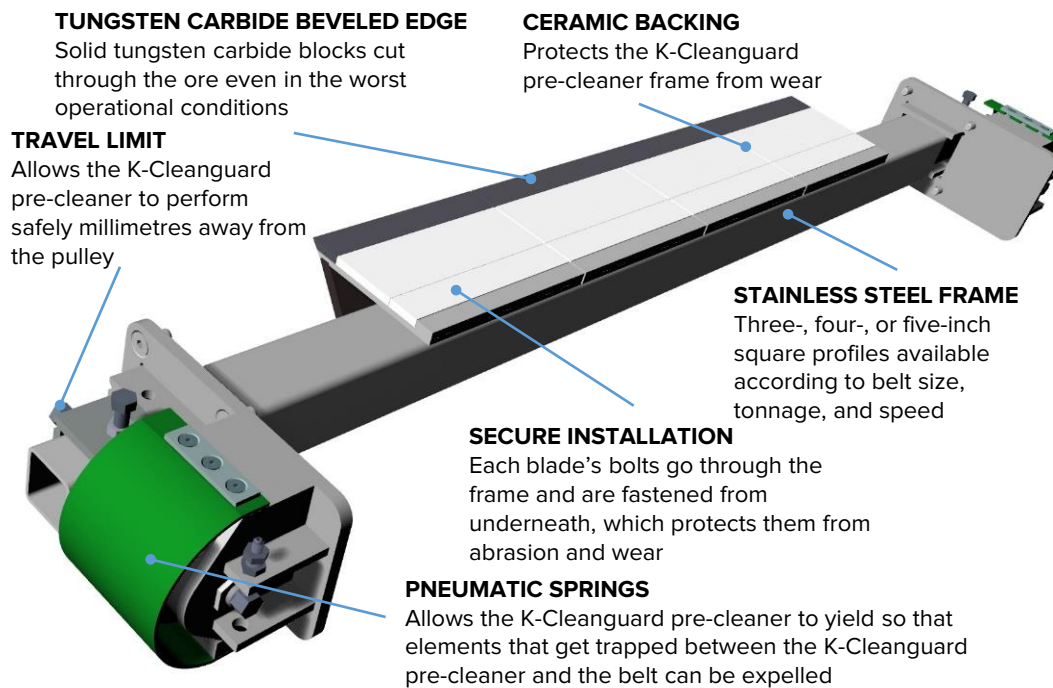


K-Cleanguard Belt Pre-Cleaner

When the conveyed ore is so sticky that it doesn't fly off at the discharge pulley, normal scraper systems struggle to remove it from the belt. This usually means that the whole conveyor belt system gets clogged with carryback, and ends up with an unscheduled stop for cleaning. In partnership with Tecnipak, K-Cleanguard pre-cleaner has been designed to cut through the thick layer of ore, releasing the bulk of the material from the belt, and allowing it to continue its journey through the chute.

The cleaning edge is composed of several blades placed next to each other, each of which have a beveled attack edge made from solid tungsten carbide blocks and a ceramic layer that protects the frame of the K-Cleanguard pre-cleaner from wear.



- **Specialty cleaner.** Designed to improve cleaning when the bulk of the conveyed ore doesn't fly off the discharge pulley, the K-Cleanguard pre-cleaner cuts through the bulk and allows for the primary cleaner to perform in normal conditions. Highly favored in leaching operations where the ore is particularly cohesive and sticky.
- **Tough.** The frame is made from a three-, four-, or five-inch stainless steel square profile with thicknesses from 1/4" to 3/8".
- **Pneumatic springs safety mechanism.** The K-Cleanguard pre-cleaner works millimetres away from the discharge pulley and has pneumatic springs that allow it to yield so that any elements that get trapped between the belt and the K-Cleanguard pre-cleaner are expelled.
- **Remote adjustment.** The adjustment controls can be installed in a safe place, away from the hazard zone, which allows the K-Cleanguard pre-cleaner to be adjusted while the belt is running.
- **All-around reliability.** Every part has been designed and developed to perform with minimal maintenance and a wide tolerance to changes in the working conditions.

SPECIFICATIONS:

- ✓ Belt speeds up to 7.5 m/s (1,450 fpm)
- ✓ Belt widths from 900 mm up to 3,150 mm (36" up to 124")
- ✓ Pulley diameters from 800 mm up to 3,000+ mm (32" up to 118 "+")

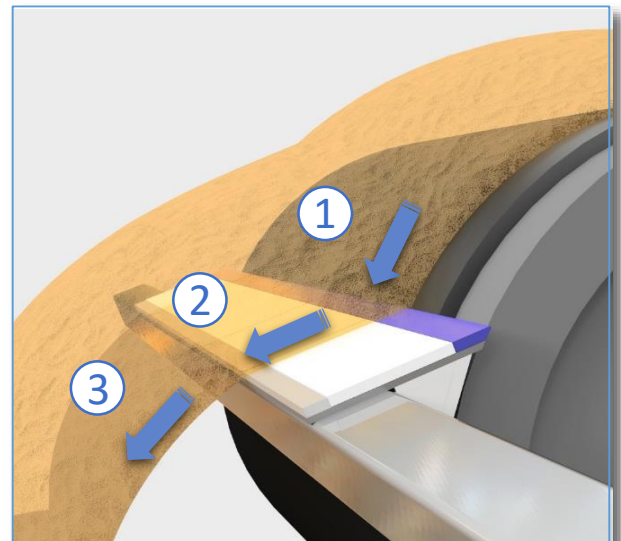


Watch it in action!

K-Cleanguard Belt Pre-Cleaner

WORKING PRINCIPLE

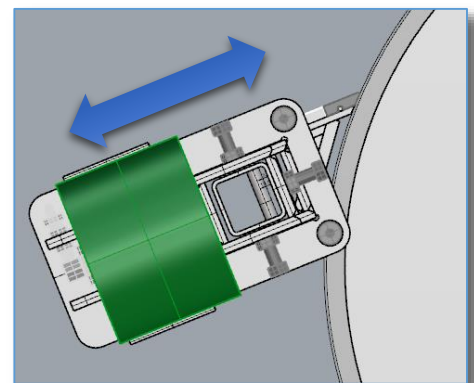
1. The cleaning edge is composed of several blades, each with a tungsten carbide beveled edge that is adjusted so as to be a few millimetres away from the pulley. When the moving ore encounters the K-Cleanguard pre-cleaner, the cleaning edge cuts through the ore and hence detaches the bulk of the conveyed material so it can be driven into the chute.
2. Once the bulk of the ore has been detached, the K-Cleanguard pre-cleaner has to redirect the ore over the K-Cleanguard pre-cleaner and into the chute. This exerts a great force on the surface of the blades, which also generates an important abrasion stress. Ceramic tiles withstand the abrasion while at the same time pass down the force onto the frame being held by the adjustment consoles through the pneumatic springs.
3. Finally, the ore is clear from the K-Cleanguard pre-cleaner and continues its journey through the chute. Over the belt remains a thin layer of ore, which is later removed by the primary and secondary cleaners.



PNEUMATIC SPRINGS SAFETY MECHANISM

In cases where a rock gets jammed between the K-Cleanguard pre-cleaner's cleaning edge and the pulley, it is necessary that the rock can be released to avoid damage to the belt.

Thanks to the pneumatic spring safety mechanism, when a rock gets stuck and the pulley pushes it further between the pulley and the cleaning edge, the frame of the K-Cleanguard pre-cleaner yields. The pneumatic springs absorb the displacement of the K-Cleanguard pre-cleaner until the rock is expelled, at which point the springs restore the K-Cleanguard pre-cleaner to the working position. All of this happens in a fraction of a second, so the cleaning quality is never impaired.



Type	Workload	Blade height [mm]	Maximum belt speed [m/s]	Belt width [mm]		Head pulley diameter [mm]	
				Min	Max	Min	Max
CDP1	Normal	215	6.5	900	1,500	800	3,000+
CDP2	Heavy	285	7.5	1,200	2,100		
CDP3	Extra Heavy	308	7.5	1,500	3,150		

K-Cleanguard part number	Belt width [in]	Number of blades required	Blade part number	Blade weight [kg]	Consoles weight [kg]	Frame weight [kg]	Stainless profile [in]	Standard frame length [mm]
CDP1-120-00C	42	4	CEP1-030-KHX	7.5	44	52	3 x 1/4	1,800
CDP1-150-00C	48	5	CEP1-030-KHX	7.5	44	61	3 x 1/4	2,000
CDP2-180-00C	60	6	CEP2-030-KHX	9.5	61	144	4 x 3/8	2,400
CDP2-210-00C	72	7	CEP2-030-KHX	9.5	61	170	4 x 3/8	2,800
CDP3-200-00C	72	8	CEP3-025-BHX	35	90	280	5 x 3/8	2,800