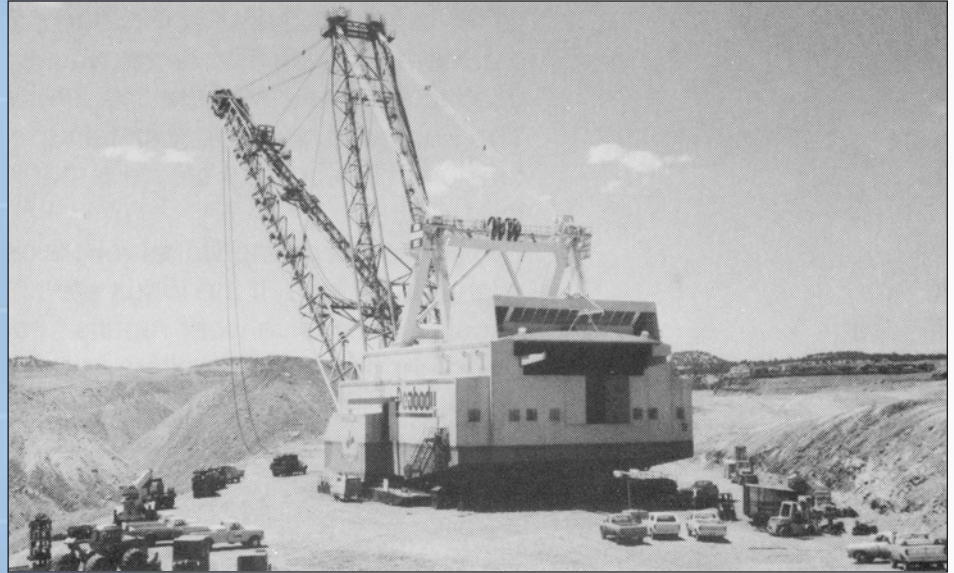


## Dragline & Shovel Applications



### Fabreeka® Ring Cushion Reduces Maintenance and Downtime in Over 300 Installations

Fatigue stress cracks develop in the live roller ring support structure. Continuous roller action and shock on the rails transmits directly on the "tub" causing damage. The installation of a Fabreeka® shock and vibration control ring (ring cushion) will eliminate fatigue and shock-related damage by absorbing the energy produced.



Cracking and chipping of the rail surface occurs as the live rollers locally work-harden the rail. Uneven wear patterns develop where alignment is lost. The Fabreeka® ring cushion allows the rail a controlled amount of flexure to maintain proper contact. Loading is distributed; therefore, localized stresses that cause damage are minimized.

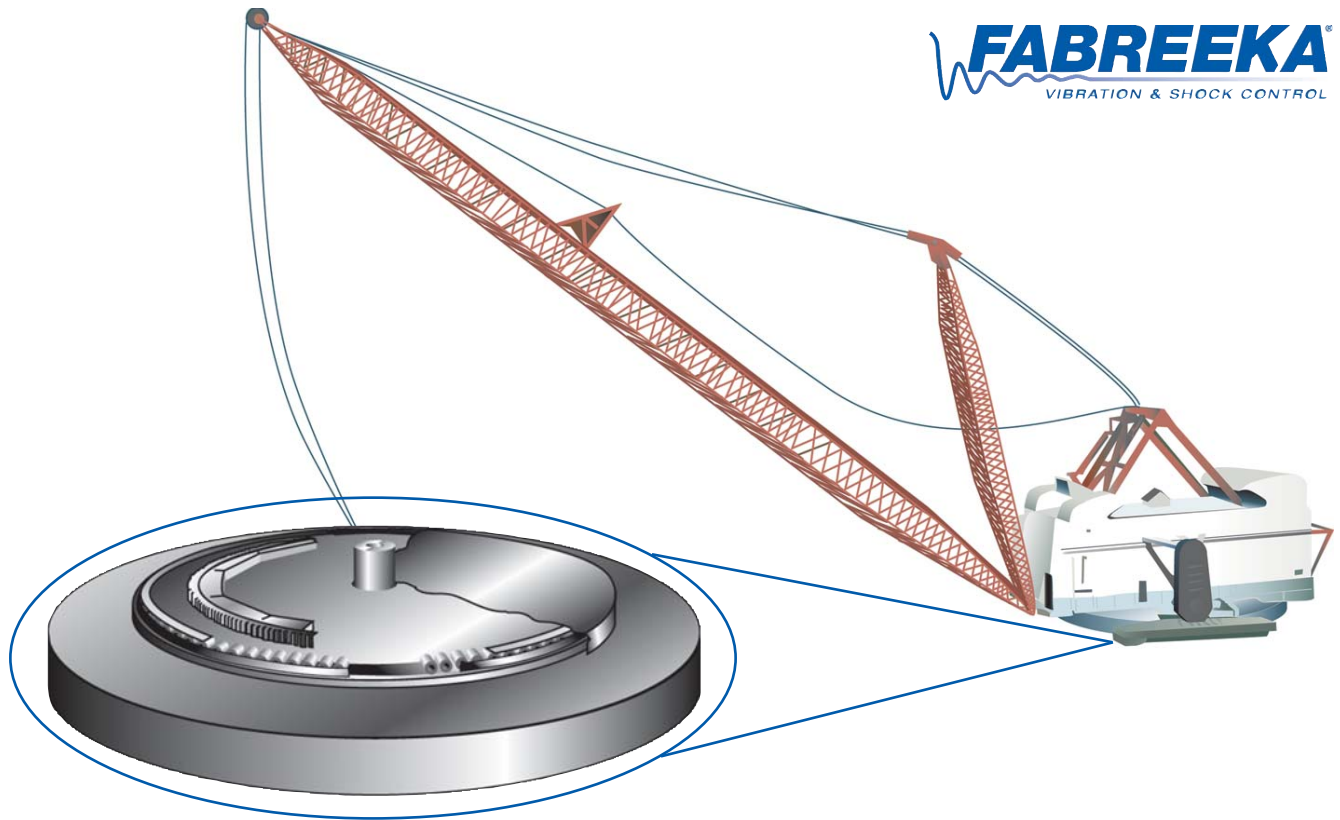
Field maintenance and repairs are difficult and often require special tools. This causes unwanted downtime and losses in production. The Fabreeka® ring cushion is easily retrofitted to any large mining shovel or dragline. This can be done in the field with standard tools and jacks that are readily available.

#### *A few satisfied Fabreeka® ring cushion customers:*

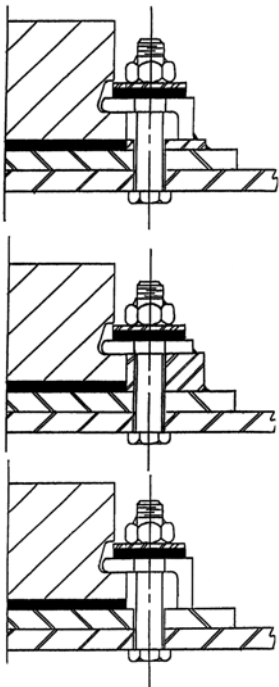
- ◆ AMAX Coal Co.
- ◆ Arch Mineral Corp.
- ◆ Brown Badgett Coal Co.
- ◆ Bucyrus Erie Co.
- ◆ Central Ohio Coal Co.
- ◆ Cimмерon Coal Co.
- ◆ Colowyo Coal Co.
- ◆ Consol Coal Co.
- ◆ Drummond Coal Co.
- ◆ Garland Coal & Mining Co.
- ◆ Jeddo-Highland Coal Co.
- ◆ King Coal Co.
- ◆ K & J Coal Co.
- ◆ Northwestern
- ◆ Old Ben Coal Co.
- ◆ Peabody Coal Co.
- ◆ Pittsburgh & Midway Coal Co.
- ◆ PM&M Mining
- ◆ Trapper Mining Co.
- ◆ Utah International Coal Co.



The Fabreeka® ring cushion is placed between the rail and support structure on both upper and lower rails.

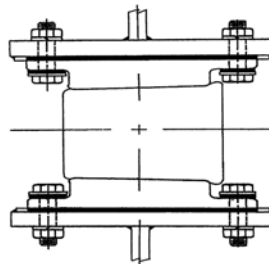


### Typical Installation Arrangements



Under the continuous duty cycle of the dragline, structural joints and bolted connections can vibrate loose. Fabreeka® washers can be used to eliminate vibration-induced loosening. The Fabreeka® washers maintain constant pre-tension in the bolts to create a more secure joint.

High loads on individual rollers occur when alignment is lost. If the loads are not shared equally, excessive wear results. Improved smoother riding of the rollers is achieved by the ring cushion. This extends the life of the rollers, bearings and support structure.



Through the years, there has been extensive testing of the Fabreeka® ring cushion for shock and vibration control on the roller circle. Peak stresses were reduced as much as 40%. To discuss how you can outfit your dragline or shovel with a Fabreeka ring cushion, please contact our Engineering Department.

**World Headquarters**  
**Fabreeka International Inc.**  
PO Box 210  
1023 Turnpike Street  
Stoughton, MA 02072  
Tel: (800) 322-7352  
Tel: (781) 341-3655  
Fax: (781) 341-3983  
E-mail: info@fabreeka.com

**Canada**  
**Fabreeka Canada Ltd**  
2907 Portland Drive  
Oakville  
ON L6H 5S4  
Tel: (800) 322-7352  
Fax: (781) 341-3983  
E-mail: info@fabreeka.com

**Holland**  
**Fabreeka bv Holland**  
Molenwerf 12  
Postbus 133  
1910 AC Uitgeest  
Tel: 31 - (0)2513 20305  
Fax: 31 - (0)2513 12830  
E-mail: info@fabreeka.nl

**Germany**  
**Fabreeka GmbH Deutschland**  
Hessenring 13  
Postfach 103 (D-64570)  
D-64572 Büttelborn  
Tel: 49 - (0)6152-9597-0  
Fax: 49 - (0)6152-9597-40  
E-mail: info@fabreeka.de

**England**  
**Fabreeka International Inc.**  
8 - 12 Jubilee Way  
Thackley Old Road Shipley  
West Yorkshire BD18 1QG  
Tel: 44 - (0)1274 531333  
Fax: 44 - (0)1274 531717  
E-mail: info@fabreeka-uk.com