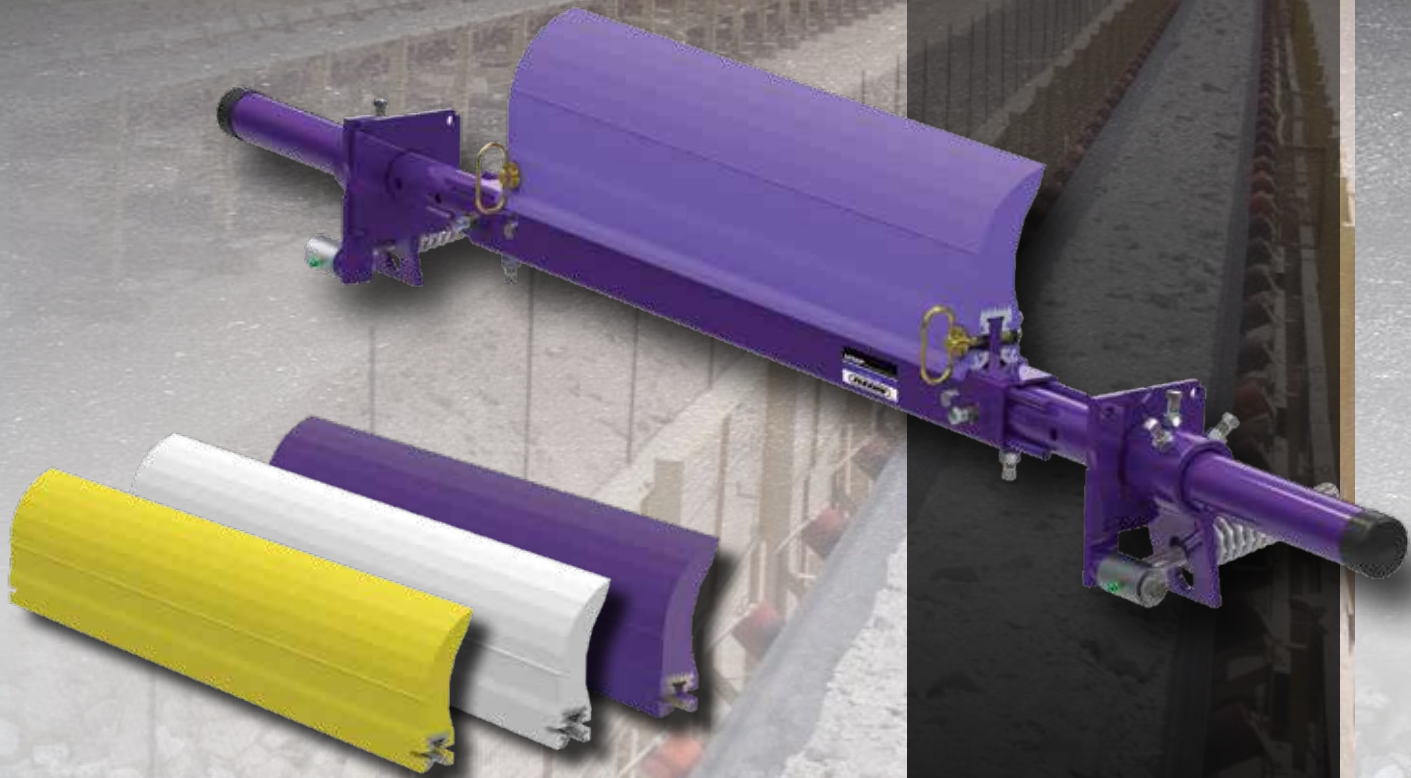




*Partners in Productivity*

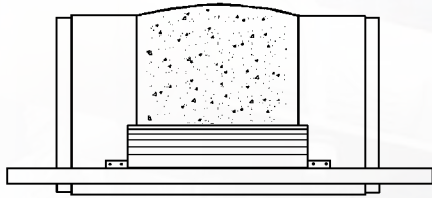
# PRECLEANERS & REPLACEMENT BLADES





# The Flexco Difference

*Flexco helped pioneer many of the belt cleaner features found today that help improve conveyor performance by reducing carryback and minimizing downtime.*



**Material Path:** Since their inception, all Flexco cleaners have come equipped with the option to match the blade to the material path. This helps minimize the differential blade wear ("smile effect") and reduces the frequency of blade retensioning and replacement.



**Blade Attack Angle:** Flexco's patented faceted profile ensures that the blade contacts the belt at the ideal angle to maximize the cleaning efficiency throughout the life of the blade.



**Compression Spring:** Maintaining proper tension is key to maximizing blade life and cleaning performance. The simple but effective compression spring design from Flexco allows anytime tension verification and can be adjusted without waiting for a shutdown. Flexco also offers other tensioners such as air and nitrogen that can offer premium performance options.



**Pole Strength:** Flexco also leads the way in setting the industry standard in terms of pole strength to ensure the blade is held at the correct position, as well as resistance to bending and twisting. From launch, our products featured a robust 60mm (2-3/8") pole diameter on our standard product and 73mm (2-7/8") pole diameter on our heavy-duty Mineline® product range.

## Types of Precleaner Blades

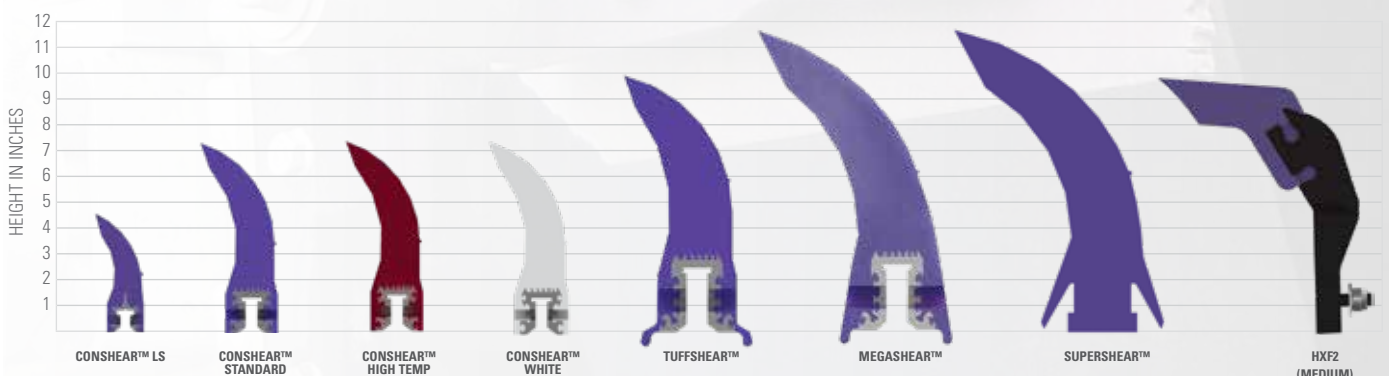
*Flexco's polyurethane blades are produced in our Grand Rapids, MI operation. Our polyurethanes were developed following testing on over 100 various formulas to identify the best solutions to the widest range of applications.*

Our standard purple formulation is ideal for most standard applications and has years of proven, unmatched success in applications such as aggregate, coal, iron ore, copper, etc.

Our yellow, high-temperature formulation addresses applications in clinker, cement, asphalt, and coke, among other high-temp applications. Its higher durometer also lends itself to improved performance in high-tonnage and/or heavy, wet or muddy applications.

Lastly, our white formulation, made from chemical-resistant and FDA-approved materials, is ideal in applications containing fermentation byproducts or pre-processed foods, such as sugar.

All of these formulations are available in a variety of formats to suit each individual application.



# High-Performance Polyurethane Blades



*Through extensive laboratory and field testing, our engineering department has identified several properties that help to determine how well a polyurethane blade will perform in real-world applications.*

**DIN Abrasion:** The DIN Abrasion test can be used to determine the wear rate of urethane formulations. Blade samples with lower material loss after a DIN test have a lower score, indicating longer predicted wear life. While this laboratory test is not the singular factor in predicting blade life, it is a leading indicator of what to expect in operation. Other factors such as durometer, tensile strength, and elongation also play a role.

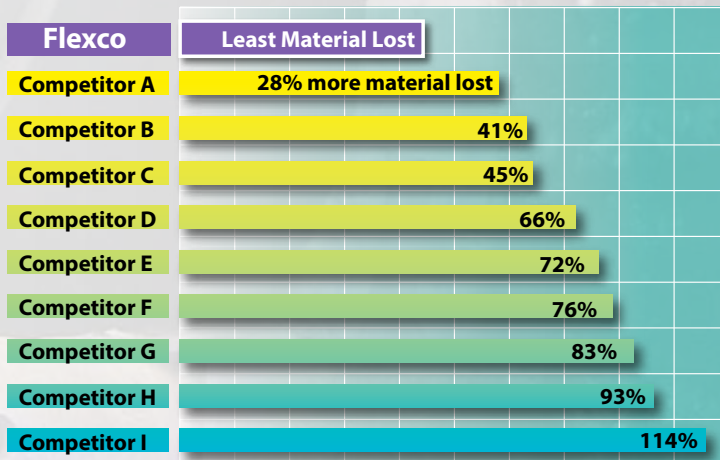
**Flexco ConShear Blades:**  
 Standard Purple  
 High-Temp Yellow  
 Food-Grade White

Flexco compared ten US and global manufacturers on DIN abrasion as part of our ongoing research and goal to provide the highest-performing blades on the market. These lab tests are conducted in Flexco's research facility and independently run and verified by Akron Development Labs.

**NOTE:** In DIN abrasion results *the lower the number the better*, as it represents how much material abrades away during the test.

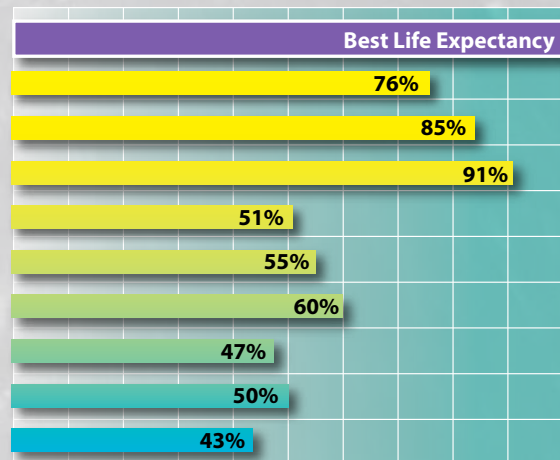
## DIN Abrasion

Bars represent **amount of blade material lost** during wear testing



## Life Expectancy Scores

Combination of DIN Score, Usable Polyurethane, and Blade Contact Area



**Life Expectancy:** When belt cleaners are installed and tensioned correctly, there are a few factors that contribute to the overall life expectancy of a blade. The quality of the urethane is one of the leading factors. As noted with the DIN abrasion results above, not all urethanes are created equal. Another key factor is the amount of usable urethane and how the blade contacts the belt.

Analysis of all of these elements allows for an estimation of relative life expectancies\* of Flexco's ConShear blade versus comparable competitive products in the industry. The superior abrasion resistance and blade volume, combined with our patented faceted blade profile, points to an industry-leading life expectancy.

Flexco continues to enhance precleaner performance to minimize downtime and provide a greater return on your investment. We utilize independent test labs, Flexco-based test lab, internally controlled conveyor systems, and most importantly, field-proven results to verify that the advancements we make lead to improved cleaning performance and blade life.

\*Life expectancy is not measured as an estimate of time, but a percentage relative to other samples.





### EZP-LS "Limited Space" Precleaner

Maximum Belt Speed\*: 2.5 m/sec (500 fpm)  
 Pulley Diameter from 150 – 550mm (6" – 22")  
 CEMA Class 2



### EZP1 Precleaner

Maximum Belt Speed\*: 3.5 m/sec (700 fpm)  
 Pulley Diameter from 250 – 900mm (10" – 36")  
 CEMA Class 3



### MSP Standard Mine-Duty Precleaner

Maximum Belt Speed\*: 3.5 m/sec (700 fpm)  
 Pulley Diameter from 400 – 1050mm (16" – 42")  
 CEMA Class 3



### MMP Medium Mine-Duty Precleaner

Maximum Belt Speed\*: 5.0 m/sec (1000 fpm)  
 Pulley Diameter from 400 – 1200mm (16" – 48")  
 CEMA Class 4



### MHP Heavy-Duty Precleaner

Maximum Belt Speed\*: 7.5 m/sec (1500 fpm)  
 Pulley Diameter from 500 – 2100mm (20" – 84")  
 CEMA Class 5



### MHCP Heavy-Duty Cartridge Precleaner

Maximum Belt Speed\*: 6.0 m/sec (1200 fpm)  
 Pulley Diameter from 500 – 1200mm (20" – 48")  
 CEMA Class 5



### H-Type® HXF2 Precleaner

Maximum Belt Speed\*: 1000 fpm (5.0 m/sec)  
 Pulley Diameter from 10" – 53" (250 – 1325mm)  
 CEMA Class 4

\*Belt speeds can be higher in vulcanized belt applications.

CEMA (Conveyor Equipment Manufacturers Association) publishes a guide with the explicit goal of providing "a uniform method for determining the application class of any individual belt cleaner." This is meant as a way to assist in the selection of the correct belt cleaner or belt cleaner system. The complete guide, titled "Classification of Applications for Bulk Material Conveyor Belt Cleaning," or CEMA Standard 576, is available from CEMA.

The classification is built on a points system based on five key criteria:

1. belt width
2. belt speed
3. splice type
4. material abrasiveness
5. material stickiness/moisture content

Each of these criteria score points; points increase based on the impact it would have on the required cleaner. Wider belt widths, faster belt speeds, introduction of mechanical splices, increase in material abrasiveness (using CEMA Standard 550), and increasing the moisture content of the material all add to the point totals when scoring an application.

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