

# Flat-Back Elbow

**Cut Downtime up to 97% for Extreme Wear Applications**

## Typical applications:

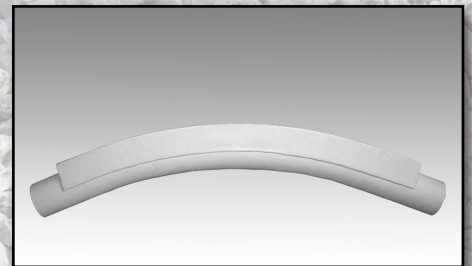
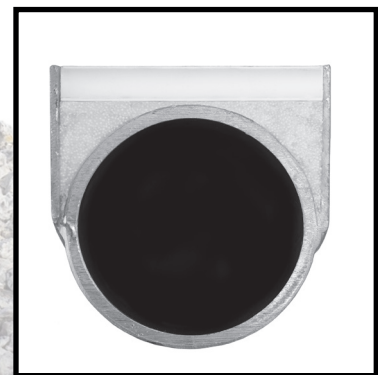
metals, composite products, aggregates, fly ash, cement

## Benefits

- 30-40x longer lifespan than bare elbows
- Greatly reduces Aggressive Wear & Extreme Impacts
- Save \$ on Maintenance Labor, Product Loss & Downtime
- Can fit any application
- Easily replaces existing elbows
- Doesn't change line flow
- Excellent Lead times

## Additional Specs & Info

- Any diameter, degree, and Centerline Radius
- Carbon steel or stainless steel
- Pipe (I.D.) or tube (O.D.)
- Plain, flanged, grooved, or other specified ends
- Ceramic/Tile Linings also available (*see back page*)
- Special orders are welcome



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**PROGRESSIVE**  
PRODUCTS INC.  
The Elbow People™



## What Customers Say:

"We have been doing business with Progressive Products for years and have always had quick turn on quotes and great customer service from all departments." - Ryan W.

"Progressive Products have provided us with Ceram-Back® Elbows for the past 2 years! The quality of these products are exceptional and have improved our convey reliability and cost. This company is highly recommended!" - Troy Conway



Chutes, wyes, and receivers can all be lined with money-saving ceramic tiles.

## Our Products:

Since 1979, our extremely durable and highly abrasion resistant ceramic products - inspired by the space-age technology of the space shuttle - have offered exceptional performance in almost any application. Designed to remain in your system much longer than other elbows, they eliminate unwanted maintenance costs, loss of material, and system downtime.

Designed and manufactured for extremely abrasive applications. The cast ceramic flat-back elbow offers incredible resistance to wear, and uses a pipe or tube inner core substrate to further minimize wear caused by the outlet transition.

Its high durability allows this elbow to stay in your system for a long time without being changed. That means you can reduce your maintenance costs and system downtime while improving your production potential.

## COST SAVING WORKSHEET

AVG Time to replace elbow: \_\_\_\_\_ hrs X MAINTENANCE Labor Cost per hour: \$ \_\_\_\_\_

= \$ \_\_\_\_\_ Maintenance Labor Cost to replace elbow each time

+ \$ \_\_\_\_\_ Revenue Loss during production shutdown

+ \$ \_\_\_\_\_ AVG Cost of Product Loss whenever elbow fails

\_\_\_\_\_

= \$ \_\_\_\_\_ **Non-Elbow Cost** to the company per each elbow replacement (not counting the cost of the elbow itself)

	Bare Elbow	Flat-Back
<b>+ Elbow Cost:</b>	\$ _____	\$ _____
= Subtotal Elbow + Non-Elbow Cost per replacement:	\$ _____	\$ _____
X Avg # of elbows replaced over (1) Flat-Back Lifespan:	40	1
<b>= True Lifespan Cost vs (1) Flat-Back Elbow replacement:</b>	\$ _____	\$ _____

*\*This assumes fully staffed & available maintenance personnel isn't an issue, if it is an issue then advantages of having less frequent elbow replacements are even more important and cost effective than this worksheet shows.*