Veneer Services®
machines, supplies, and services

More Features.
Better Quality.
Damn Fine Engineering.

Bull Wheels vs. Chains on Butt Flare Reducers

A noticeable difference between our butt flare reducer and those from many of our competitors is that our reducer uses bull wheels rather than chains to rotate logs. While there are several reasons why manufacturers may design their reducers with chains, we argue bull wheels are a better choice because they require less maintenance and are more reliable.

Why are Some Log Reducers Equipped with Chains?

There are three reasons why manufacturers may design their flare reducers with chains rather than bull wheels. One, it's easy to arrange the chains and guides in a V-shaped trough. The advantage of this design is that it accommodates a wide range of log diameters. However, while this may be helpful at some mills, the advantage is mitigated by the fact that most sawmills, cooperages, and veneer mills only process logs within a range of diameters, and our engineers can easily adjust the bull wheel spacing to accommodate this range. The advantage is further mitigated because reducers can ultimately only trim logs over and under certain diameters—the height of the hold down arm determines the upper limit and the reach of the cutters determines the lower.

The second reason manufacturers may opt for chains is to rotate logs faster and therefore process more per shift. Specialty chains in these machines grip logs well, and the V trough ensures the logs won't bounce out. But the rate at which a butt flare reducer can process logs is more limited by the characteristics of the wood and the reducer's horsepower than whether it uses chains or bull wheels to rotate the logs. Reducers can process logs faster when the density is lower, the butts smaller, and the stems more uniform. For these reasons, reducers can usually process softwoods much faster than hardwoods. And the higher the reducer's horsepower, the faster it can trim without overloading the cutters. It's also worth mentioning that how the reducer receives logs and whether it trims them automatically or through manual input affect how fast the reducer can process logs. Rotational speed isn't the only reason one reducer trims more logs per minute than another.

The third possible reason manufacturers make their butt flare reducers with chains is that the chain troughs can perform double duty as ejectors. This simplifies the design by eliminating additional components. Really, though, using the trough as an ejector isn't much simpler than using dedicated ejectors, and dedicated ejectors take on wear and tear that would otherwise be added to the chains and chain guides.

Benefits of Using Bull Wheels on Butt Flare Reducers

Not only are potential advantages to chains limited, but using chains to rotate logs on butt flare reducers has downsides, namely more maintenance and less reliability. Consider the stresses reducers receive as logs fall into them. When the reducer is equipped with bull wheels, the thick, heavy wheels and shafts absorb the impact. This impact can, and often does, damage chains and chain guides, which

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are composed of lighter-gauge steel than bull wheels. Maintenance crews must therefore spend more time and money maintaining reducers with chains than those equipped otherwise.

Beyond impact loads, the chains and guides wear quickly due to their activity—rotating heavy, wet logs. This results in a higher operational cost. It also brings with it less reliable performance. The chance that something could break outside scheduled maintenance hours is greater. Thus, the risk of lost production is higher.

Bull wheels, on the other hand, require virtually no maintenance. Any damage they incur is nearly always superficial.

When choosing a flare reducer for your mill, go with the machine that will allow you operate as profitably as possible. That's not a reducer with chains. It's ours. **Contact us today** for a quote on your butt flare reducer.

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