Tube Bundle Cutter Specifications Guide

When looking for a tube bundle cutter, Elliott recommends the following specifications to ensure you find a saw that is both high quality and highly productive but avoids costly features that add little value. These specifications will help your organization make an informed decision on the features and specs that are important to your operation, and help to reduce the cost of purchasing a quality tube bundle cutter.

Please see the next page for specific reasons for each of the following recommendations.

Recommended Specifications:

A. Automatic Cutting Force Control allows the saw feed to automatically pause during larger portions of the cutting cycle, while maintaining constant cutting force.
B. Heavy-duty Cone Drive™ gearbox with Double Enveloping™ gear set gear set has 3 times more contact between teeth and worm.
C. A triple security system that stops the operation in case the blade brakes or stalls.
D. Control Panel Pedestal with a 6.5' (2 m) minimum reach from the cutting area.
E. Adjustable cutting speed according to recommended industry speeds, which are between 50-275 ft/sec (15-84 m/sec).
F. Quick installation blades.
G. Minimum quantity lubricant (MQL) system.
H. Hour Meter for scheduled preventive maintenance.
I. Bundle Support Table & Binding Straps.
J. Maintenance Kit.

Avoid These Specifications:

A. Normalized steel structure.
B. Hydraulic band tensioning.
C. Hydraulic blade guides.
D. Hydraulic sheet clamp.
E. Prismatic guides.
F. Auto shutuff lubrication system.
G. Minimum cutting diameter.
H. Maximum cutting depth.
I. Safety fence.

Specification Guide Reference Page

Recommended Specifications:

A. Automatic Cutting Force Control increases productivity without sacrificing blade life.
B. Heavy-duty Cone Drive™ gearbox with Double Enveloping™ provides extra torque with no increase in gear size for more power and reliabiltiy with minimal maintenace requirements.
C. A triple security system increases productivity by allowing unattended operation.
D. A remote Control Panel Pedestal adds safety and convenience by allowing you to place the pedestal away from the cutting blade.
E. Adjustable cutting speed. It's highly recommended not to exceed 275 ft/sec (85 m/sec) as it will work harden the tubes, increasing the cutting time and reducing the blade life.
F. Quick installation blades eliminate the obsolete method of welding the blade, which can produce fractures and reduce the life of the blade.
G. Minimum quantity lubricant (MQL) system minimizes disposal costs and prolongs blade life. This system eliminates the use of cutting oil, minimizes contamination and consumes less than 1 liter of oil per every 5 hours of operation. A low coolant sensor alerts the operator when the lubricant is low.
H. Hour Meter for scheduled preventive maintenance lowers operating costs by ensuring proper maintenance cycles.
I. Bundle Support Table & Binding Straps support and secure the vessel during cutting. This eliminates hassles and ensures a proper cut reducing the chance of pinching the blade during operation.
J. Maintenance Kit includes spare maintenance parts for quick replacement and no down time. Includes: Blade Brushes, Drive Belt, Gear Oil, Bearings, Fuses, Roller Axles, and Roller Supports.

Avoid These Specifications:

A. Normalized steel structure is not recommended because the use of normalized steel is typically reserved for applications subject to impact or high levels of internal stress. The bundle cutting application is not subject to these conditions and therefore, this is an unnecessary cost without noticeable benefit.
B. Hydraulic band tensioning complicates the setup and operation of the unit by requiring additional wiring and controls. Manual band tensioning offers very simple and ergonomic solution for manually tensioning the blade consistently every time and costs less than hydraulic band tensioning.
C. Hydraulic blade guides are an unnecessary cost when the same result can easily be achieved by hand. We have found with a simple, ergonomic design most operators can set the guides easily.
D. Hydraulic sheet clamps complicate the wiring and controls and have more safety concerns due to its reliance on consistent hydraulic pressure compared to a mechanical clamping system.
E. Prismatic guides refers to a type of roller bearing that is not superior in quality or performance than other roller bearings. Specifying a specific style of bearing does not add any additional value and can increase the cost of the saw.
F. Auto shutuff lubrication systems create complications by stopping in the middle of the cut. Due to the minimal risk of completing a cut when the coolant is low, we recommend a lubrication system that uses a sensor to alert when the coolant is low, but does not stop the cutting process.
G. Minimum cutting diameter specifications limit the capabilities of the saw. There is no added benefit in limiting the minimum cutting diameter since with more cutting diameter capabilities, more vessels can be cut with the saw.
H. Maximum cutting depth specifications limit the capabilities of the saw. There is no added benefit in limiting the maximum cutting depth as the greater the cutting depth, the more flexibility for varied cutting distances of the vessel.
I. Safety fences are not typically included with non-hazardous industrial equipment. In this application, a safety fence would take up additional space in the work area and increase costs.