



Semi-automatic Heavyduty Bandsaws

- Model Number : SH-7656
- Design Style : Large Section Cutting: Billets, Ingots, Dies, Plates

Specifications

Maximum Cutting Capacity	Round	560 mm (22")
	Square	560 mm (22")
	Height x Width	560 x 760 mm (22"-30")
Saw Blade	Size	6665L x 54W x 1.6T mm (262.4" x 2.1" x 0.063")
	Speed	20-100 m/min (66-328 fpm)
	Tension	Hydraulic (with blade breakage detector)
Motor Output	Blade	7.3 kW (10 HP)
	Hydraulic	1.5 kW (2 HP)
	Coolant	0.19 kW (1/4 HP)
Tank	Hydraulic	50 L (12.5 gal)
	Coolant	100 L (25 gal)

Machine Features

Machine Structure:

Oversized Precision ground, large Dual Columns support and guide the rugged saw head through the entire cutting cycle. The saw head adopts a back tilt design which allows the blade to twist less than traditional bandsaws between the wheel and blade guide; thereby putting less stress on the blade, insuring longer life.

The oversized round columns provide *hundreds of square inches* of continuous surface contact with the sawhead throughout the entire cutting process.

Cross Link is located on the top of the columns, connecting the two columns to form an archway design that gives it sound structural strength.

Hydraulic shuttle vise assembly, made of heavy-duty cast iron with replaceable hardened wear plates, rides on *two large guide shafts* that are capable of handling extreme loads. Both shafts are ground and chrome plated for durability and smooth material feeding.

Blade Drive:

The *gearbox* is specially designed to accept high lateral pressure. Unlike conventional gearboxes, the Cosen design accepts more pressure during operation and will not create

thermal distortion, providing long gearbox life under production conditions.

Inverter blade drive system allows infinitely variable blade speeds to be controlled by the operator from the control panel with turn of a knob. The system comes standard with *LED readout* for convenient and accurate setting of blade speed.

Blade Guidance & Lubrication System:

Carbide blade guides are activated *hydraulically* for consistent and correct carbide guide clamping to insure straight cuts. The guides are relieved to provide unsurpassed lubricating and cooling of the blade and blade guides.

The *bearing guides* eliminate blade stress by pre-aligning the blade before it enters the carbide guides. Two *additional guides* located on a central axis support the blade from the top, giving it extra penetrating force for faster cuts.

Automatic hydraulic blade tensioning device provides correct blade tensioning when the machine is turned on and will slightly release the tension when the machine is not running. This extends blade life. The on-off hydraulic valve switch is an added feature making blade change quicker and easier

Integral coolant system. Coolant is supplied at three critical points: exit & entry of blade through blade guides, and middle of cut via *adjustable flex hose*.

Synchronized power driven blade brush effectively cleans chips from blade to extend blade life.

Control & Automation:

The operator's control station ergonomically located on the front side of the saw is convenient and user friendly. All operator controls are positioned on the top of the control box and clearly labeled for ease of operation. The electrical components are located inside the control box with the main lockout disconnect on the front of the control box for safety and easy maintenance.

Cosen's *Dual Valve Feed System* achieves optimal cutting performance. The operator can easily pre-select the correct feed pressure and feed rate for efficient cutting of any material.

Work height selector will raise the saw head to preset height after cut-off to be ready for the next cut.

"Last Cut" or "Keep On" selector enables you to choose either to turn the machine off or return the saw head to the pre-selected cut height ready for the next cut.

Selector Switch for *bundle or single* cutting modes

Material Clamping & Feeding:

Hydraulically powered infeed lift roller makes material placement easy. As vise clamps the material, the lift roller automatically drops below work bed. As vise is opened manually, the lift roller raises up to help infeed of the material.

The lift roller is capable of power-feeding material forward or backward via remote control.

Split vise jaws on the front machine vise are standard. The split front vise will hold the work piece on both sides of the blade for a burr-free cut. This system also features automatic feeding of material down to a remnant length of 170mm.

Full stroke hydraulic front and rear vises enable clamping and unclamping of any material from the operator's control station with touch of a button.

Ductile cast iron vise with replaceable hardened wear plates.

Discharge Table with built in coolant return adequately supports cut-off stock and provides coolant savings in the long run.

Safety:

Proximity switches sense both blade slippage and blade breakage and will automatically shut off the machine if either of these conditions should occur.

All blade covers, and guarding on the saw are painted Alert Orange to increase safety alertness.

All exposed electric wiring and hydraulic circuit are protected by conduits.

Electrical and hydraulic safety interlock prevents saw blade to start without vises securely clamped.

Accessories:

Blade "cip" device eases blade changing when necessary by holding the blade on the band wheel during installation, making it very easy for one person to change the blade.

Adjustable fence to support bundled cut-off stock

Additional flushing hose for cleaning

Built in work light

Bi-metal saw blade

Tool Box with tools, leveling pads, and an additional wire brush

Operation & parts manual

OPTIONAL ACCESSORIES

Cosen' s Special 2M Powered Infeed Roller Table - Combining the chain and the gear-driven power roller table makes material feeding smooth and convenient. The material feed speed can be switched between low and quick modes from the control panel. This allows the operator to quickly move the stock into sawing area then finely adjust to the exact cutting position. This infeed system moves in synchronization with the standard infeed lift roller making material feeding absolutely effortless for operator.

Hydraulic chip conveyor --Hydraulic driven shaftless design allows maximum chip removal rate without worrying about burnt up motor when material falls and binds in the chip conveyor.

Vise pressure regulator --Infinitely variable clamping pressure between 0 and full system pressure is easily adjusted and monitored by this device.

Hydraulic Top Clamps(Nesting Fixture)-- Hydraulically powered to provide secure clamping for bundle cut applications.

Vibration Damper--Vibration Damper can effectively reduce blade vibration produced under high-speed cutting. Especially for cutting small materials on bandsaws of large width capacity, the vibration damper can reduce blade vibration, increase cutting rate, and enable smooth cut-off surfaces.

Automatic Wedging Resistance --When cutting some heavy wide-flange beams, the material may stress relieve and pinch the blade. To prevent the blade from becoming wedged in the cut, the Automatic Wedging Resistance option detects the increase in required amperage and cause the saw bow to automatically rise and return into the cut repeated throughout the remainder of the cut.

Blade Deviation Detector -- Blade Deviation Detector will detect any blade deviation to insure straight cuts. The device can be pre-set to a deviation value. If the value is exceeded the machine will stop.

Planetary Gearbox -- With Cosen's specially designed planetary gearbox equipped to your machine, mechanical efficiency can be raised to above 90%, largely increasing cutting efficiency, and saving your electric bills. While due to low efficiency, the traditional worm gearbox may fail to drag along the blade and cause jammed blade. Cosen's planetary gearbox would not have this problem at all. Specially designed to sustain high lateral pressure, this drive system facilitates even more perfect cutting performance.

Prism Vise --The prism vise is constructed to cut hexagonal shaped bundles without having to loosen the pack. With the prism vise, there is more contact between the vises and the pipes; the gap between pipes will be less as well. It will provide a more stable clamping force on the material.

One Spot Full Stroke Top Clamp --The one spot full stroke top clamp is hydraulically powered to provide secure clamping for bundle cutting applications. Top clamping is done with full stroke hydraulic cylinder.