Flying saw — cold cutting for welded pipe mills

ZF series · cut length held to +/-2 mm by servo tracing · saw disc sizes as published with the lines

What a flying saw does in the line

A flying saw cuts the tube to length while the tube is still moving, so a welded pipe mill does not stop for every cut. The carriage locks onto the tube, travels with it, cuts, returns, and waits for the next length. In the equipment lists published on this site it sits after sizing and straightening and before the run-out table.

ZF series — as published

Feature	As published on the machine page
Cutting method	Cold cutting in chip mode — stated as less noise, higher safety, smooth cut end with no burrs
Tracing	Locomotor control traces and synchronises with the moving tube to hold cutting precision
Feeding	Servo feeding mechanism completes the cut and is credited with extending disc life
Cut length	Servo tracing holds the fixed length to **+/-2 mm**
Control	Human-machine interface so parameters can be changed quickly

Saw disc and drive, as published with the lines

Line that lists the saw	Saw disc	Saw drive
HG76 strengthened tube mill	OD400 × ID40 × 2.8 mm	not published on that page
High-quality tube machine line (large diameter)	OD800 × ID110 × 6.0 mm	AC 45 kW
HG165 big diameter tube mill	not published on that page	AC 90 kW

Saw carriage travel on the large-diameter line is published as rack and pinion with gear lath, and the saw waver as pneumatic. Where a cell says “not published”, that value is settled with the line specification at quotation rather than assumed here.

Where it sits in the line

Uncoiler	→	Forming & welding	→	Sizing & straightening	→	Flying saw	→	Run-out table

The saw is the last operation before the finished length leaves the mill, which is why its return time, rather than the forming speed, often sets the cycle on short-length orders.

What to specify

- **Tube outside diameter and wall thickness**, plus the maximum cut length you need.
- **Line speed** — carriage travel and return time have to be matched to the mill, because return time is what caps short-length orders.
- **What happens to the cut end** — welded, threaded or expanded — decides how much burr matters.

Machine pages and further reading

- Flying saw — full specification — steelpipemachines.com/posts/cutting-flying-saw
- Tube mill auxiliary equipment — steelpipemachines.com/category/tube-mill-auxiliary-equipment