



CT2.0 Coke Cutting Tool with AutoShift™

Reliable, Low-Maintenance Performance

Flowserve continues to set the standard in hydraulic decoking, making operations safer and more efficient for our customers. Since our first installation in 1938, and through our Worthington®, Pacific® and IDP® heritage brands, we've introduced more than 10 patented innovations across the cutting system, including the industry's first combination tool and the first AutoShift mechanism, reducing risk of operator injuries while increasing production capacity.

The CT2.0 Coke Cutting Tool with AutoShift is our latest advancement, engineered from the ground up to solve the new challenges of modern Delayed Coker Units. CT2.0 features a redesigned AutoShift mechanism and a new Lifting Diversion Plate that reduces coke fines accumulation and cartridge wear. The result is the most reliable tool with faster cycle times and lower associated operating costs.



Advancing Hydraulic Decoking

Why it matters for your operations

- **Faster cutting cycles and improved productivity**
Redesigned flow passages, a new low-mixing elbow, and an integrated flow straightener help streamline flow into the nozzle—reducing cutting time by up to 10% in customer sites, and improving overall unit throughput.
- **Lower downtime and maintenance costs**
Significant updates to the AutoShift cartridge design minimize over-rotation issues, ensuring more consistent shifting between cutting modes. The new bidirectional orifice plates act as a nozzle-clogging prevention system, reducing coke fine buildup inside the tool. Maintenance has also been simplified, oil changes are now needed just twice a year, thanks to the new Lifting Diversion Plate that reduces wear and makes oil level and viscosity less critical.
- **Greater reliability and longer tool life**
The new, lighter AutoShift cartridge delivers smoother, more precise shifting with less internal wear. The result: extended mean time between repairs of 3–5 years, lowering maintenance frequency and cost.
- **Consistent, dependable shifting under high pressure**
A redesigned cartridge mechanism engages at the start of pressurization, giving clear feedback and minimizing missed or over-rotation events, ensuring steady performance even at higher pressures.
- **Faster recovery after coke drum collapse**
In the rare event of a collapse, the optimized 13.5" diameter, rounded profile, recessed nozzles, and 19% smaller cross-sectional area make it easier and faster to free the cutting tool, reducing downtime and safety risk.

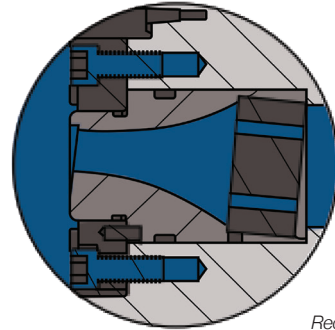
Lower downtime and maintenance costs

When it comes to preventive maintenance, we've simplified the burden. Oil changes are now required just twice a year thanks to the fact that now oil level and viscosity is not critical due to the new Lifting Diversion Plate, eliminating wear on AutoShift.



Designed for Easier Maintenance and Long-Term Reliability

- High shift-completion pressures reduce clogging and the frequency of nozzle cleaning.
- Bolted nozzles are easily cleaned and replaced on deck.
- Recessed bore and cutting nozzles minimize damage from impact with coke.
- Option to choose cutting angle 5° up, 5° down, or straight.
- Reduced profile and streamlined shape makes it easier to release the cutting tool trapped by a coke collapse.
- Improved nozzle hydraulics with a tighter spray pattern optimize cut time regardless of coke hardness and drum diameter.
- Maintenance team requires less time performing activities to preserve functionality during lifecycle (lower frequency of oil change & repairs).



Recessed bore and cutting nozzles