

# Abrasive water jet cutting

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High accuracy and success rates delivering enhanced performance, minimal downtime and a reduced operational footprint.

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## Abrasive water jet cutting



**James Fisher Offshore's (JFO) ultra high pressure abrasive water jet cutting system offers an innovative method for the internal cutting and removal of subsea tubular structures, ranging from piles and jacket legs through to multistring well casings and well heads.**

The abrasive cutting technology offers higher performance, cost savings and operational efficiencies to support the oil and gas industry's decommissioning cost reduction. Due to its higher accuracy and success rate, the system delivers enhanced performance with minimal downtime, as well as a reduced operational footprint.

A number of performance additions, including real-time cut verification, visual external cut monitoring and increased flexibility offer significant operational advantages. The unique airflow system negates the need to de-water and reduces the amount of operations in the task, minimises the equipment required, and leads to a 60% reduction in the overall cutting time. The cut verification system also ensures complete operator and customer certainty, helping to reduce the risk of stitching and, ultimately, reducing risk of over-running on high cost projects.

The advanced system also has the capacity for external abrasive water jet cutting, suitable for subsea and topside applications. JFO can offer bespoke engineering and tailor the external cutting system to project specific requirements, helping to overcome obstacles that can render other cutting tools ineffective.



## Internal cut and lift technology (ICLT)

**Internal cut and lift technology (ICLT), merges the JFO abrasive cutting system with a lifting tool, optimised with ballgrab gripping technology, to provide a simple, flexible and quick mechanism to cut and remove retired subsea assets and tubulars.**

- One cut and lift operation
- One multi purpose spread
- One mobilisation
- One multi-disciplined crew
- Reduced POB
- Reduced vessel time



JFO's abrasive water jet internal cutting head



First Subsea's ballgrab internal lifting tool



Combined single tool assembly - ICLT

## Specification

**The abrasive water jet cutting system is suitable in water depths up to 350m and can cut up to 500mm of multi-string casing.**

A typical JFO system contains the following:

Item	Dimensions L x W x H (m)	Weight (kg)
1	Downhole cutting head (DCH) I mounted on skid Downhole cutting head (DCH) II mounted on skid Downhole cutting head (DCH) III and IV and PCH mounted on skid	320 320 1030
2	Overboard chute	500
3	Hose reeler, umbilical	6500
4	Air compressor	9500
5	Abrasive mixing unit in shipping container	6300
6	Control system and HPU	7300
7	High pressure pump	7500
8	Workshop container	3100
9	Abrasive 4 tons for approx. 22 cutting hours	6500



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