

James Fisher and Sons plc  
Pioneering Sustainably



# JAMES FISHER OFFSHORE

OUR CONTROLLED FLOW  
EXCAVATION CAPABILITIES



## ABOUT JAMES FISHER OFFSHORE

James Fisher Offshore is an industry-leading provider of controlled flow excavation equipment and services with global capabilities.

With an unrivalled selection of tooling and in-house expertise, James Fisher Offshore is perfectly positioned to deliver for our customers' project requirements.

The James Fisher Offshore fleet of controlled flow excavation (CFE) equipment provides a non-contact form of excavation that eliminates the risks associated with alternative excavation methods, especially around complex subsea assets. Combining experience and innovation, we deploy the right technologies to optimise project delivery.

**James Fisher Offshore provides an integrated controlled flow excavation solution to deliver against all our clients' project needs.**

Our expertise allows us to fully understand our customers' specific requirements, providing complete methodologies and cost-effective, engineered solutions to deliver on the following subsea applications.

### CFE APPLICATIONS:

- Pipeline and cable trenching (pre / post lay)
- Backfilling of existing trenches (post trenching operations)
- De-burial of cables, pipelines, and subsea assets for IRM
- Seabed preparation and pre-installation excavations
- Pre-sweeping of sand waves
- Free-span rectification (pre / post lay)
- Rock dump dispersal
- Decommissioning and salvage excavations
- Harbour clearances / channel deepening
- With the addition of our patented high velocity jetting solution, where the water jet is inserted into the moving water column, our equipment is capable of cutting through soils in excess of 300kPa

## OUR SERVICE DELIVERY

With dedicated local resources, James Fisher Offshore is strategically positioned to react promptly to fully support our customers' offshore requirements by mitigating operational downtime and reducing overall spend on cost critical projects.

### WHY USE CFE EQUIPMENT OVER ALTERNATIVE METHODS?

Our diverse portfolio of CFE tooling spreads are engineered and proven to excel in the harshest subsea conditions across the global energy sectors.

### CFE ADVANTAGES:

- Non-contact form of excavation / trenching, maintaining the integrity of the assets
- Low pressure / high volume
- No ROV / diver requirements for any CFE operations
- One CFE spread allows for multiple applications
- Capable of operating in 1.5m - 300m water depths in standard configuration
- Ability to trench a variety of product sizes from 1"- 60"
- Real-time sonar monitoring during excavation / trenching operations
- Counter rotating impellers allow for gyroscopic stability
- Designed to accommodate varying seabed compositions, including sand, clay, silt, mud, gravel, and rock dump
- 100% flow control



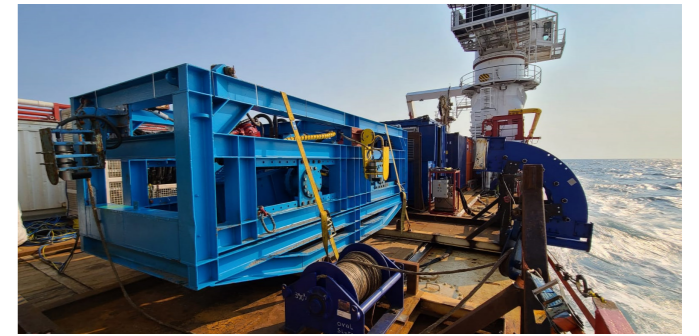
## OUR EQUIPMENT

Our CFE tools have been meticulously designed with the utmost precision to meet the diverse needs of our customers' projects. Engineered to deliver unparalleled performance, our CFE tools empower our customers to tackle their projects with confidence, efficiency, and success.



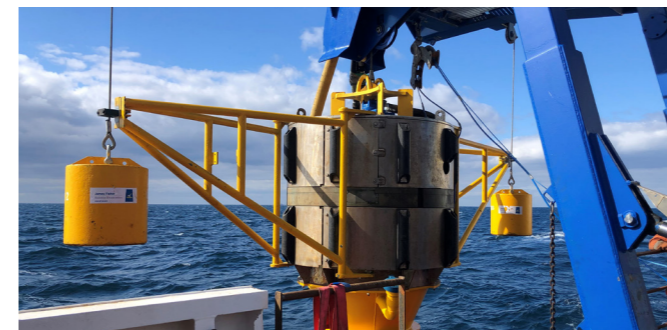
### Twin R2000

The Twin R2000 controlled flow excavation tool generates two controllable columns of seawater which travel vertically down towards the seabed at a velocity of up to 10m per second. This tool has repeatedly proven itself to be ideally suited to shallow water projects on a variety of cable and pipeline sizes. The controllability of the water columns and localised excavation effect make the Twin R2000 the ideal solution when working in environmentally sensitive areas.



### TwinProp and TR4000

The TwinProp and TR4000, an enhanced version of the TR2000 tailored for more powerful controlled flow excavation systems, represent the latest advancement in the well-established controlled flow excavation method. Counter-rotating impellers are used to produce two high volume columns to rapidly excavate the seabed. The two independent impeller housings can be adjusted to various angles and distances apart to best suit the application. The TwinProp and TR4000 is deployed using a crane or a-frame.



### The SP6000

The SP6000 is ideal for deployment on various vessels thanks to its compact design. The SP6000 works by producing a fully controllable column of water which has a maximum flow of 6000l/sec at a maximum velocity of 8m/sec, to excavate the seabed efficiently and precisely. Operational capability is further enhanced by its ability to work in water depths from 3m – 300m and the employment of real-time sonar monitoring and optional LARS\*.

*\*Limited to 175m when deployed via LARS.*

#### LARS

We can offer our bespoke LARS equipment in support of our SP6000. LARS was specifically designed to allow the vessel crane to be used for multiple, simultaneous projects.



### The T4000 and T8000

These impressive pieces of equipment generate a single high volume low pressure water column. The high-volume flow of water fluidises the seabed and disperses the soil rapidly. The patented shape and counter rotating impellers of the kit provide controlled flow excavation by combining a non-contact method with a remote-contact real-time sonar system and gyroscopic stability.

The T4000 has a max of 4000L/sec and the T8000 has a max of 8000L/sec at full flow velocity of up to 10m per second. The T8 is used for larger size pipelines, large sand waves and larger / deeper excavations.

### Twin T8000

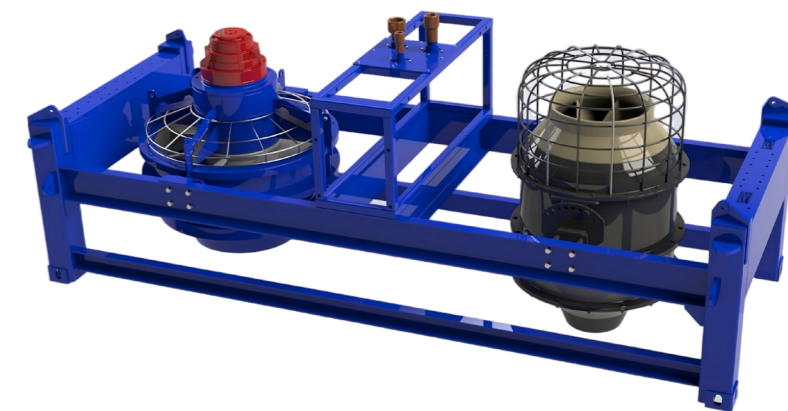
The Twin T8000 excavation tool works in a similar way to that of the T8000, but with double the output. Working from depths of 7m, the tool can generate up to 16,000 litres of water per second.



## JETFLOW100

The JetFlow100 controlled flow excavation tool has been designed to cut through tough soils and clays without the requirement of additional jetting equipment. This innovative dual function tool also complies with DNV2.7-3 subsea lifting standards.

For more information on how James Fisher Offshore can add value to your offshore operations, please visit [www.fisheroffshore.com/](http://www.fisheroffshore.com/) or contact our business development team at [info@jfdecom.com](mailto:info@jfdecom.com) or call +44 (0) 1651 873 932.



Weight & Dimensions		Technical Information	
Weight	7500kg	Model	JetFlow100
Length	4870mm	Water Depth	~2m to 300m
Width	1900mm	Mass flow nozzle exit pressure	88kPa
Height	2125mm	Max flow volume	4000l/sec
		Max flow velocity	10m/sec
		Soil strength (undrained shear strength)	Up to 50kPa shear strength in standard format
		High velocity nozzle exit pressure	213kPa
		Max flow volume	1500l/sec
		Max flow velocity	14m/sec
		Soil strength (undrained shear strength)	Up to 100kPa shear strength in standard format

Benefits
Removes the need for jetting equipment
Adheres to DNV2.7-3 subsea lifting standards
Can cut through soils/clays up to 100kPa while still providing mass flow excavation in one pass
Maintains compact deck footprint

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For controlled flow excavation enquiries,  
please contact [info@fisheroffshore.com](mailto:info@fisheroffshore.com)  
or call **+44 (0) 1651 873 932**

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