

Suction Excavation

Dig or extraction - a safer way to work



FORCE ONE
PROVIDING SAFE EFFECTIVE SOLUTIONS

Force One Ltd was established in 2004 and since then has become Europe's largest independent operator of suction/vacuum excavators.

Commencing with a safe dig service to the utilities sector, Force One Ltd rapidly expanded its service into civil engineering, construction, rail and other sectors providing a new method of excavating and removing materials within these sectors.

The company has become well known for its "can do" approach, customer focus and expertise of its machine operators and management team.

How can we help you?

Suction technology can be used across a range of applications from its original use of safely excavating over and around buried services/utilities – gas, water, electric and fibre-optics. To removing materials from storage tanks, silos, basements, tram & rail lines, tunnels & culverts. The list is endless.

At Force One Ltd our team has built a vast pool of knowledge and experience in the use of suction technology having worked on many major projects and sensitive sites across numerous business sectors. By contacting us we will answer any questions you will have on our service and this technology. You will receive help and advice in its possible application to a project, site visits, detailed quotes plus risk assessments & method statements should our service be engaged.

What is suction excavation?

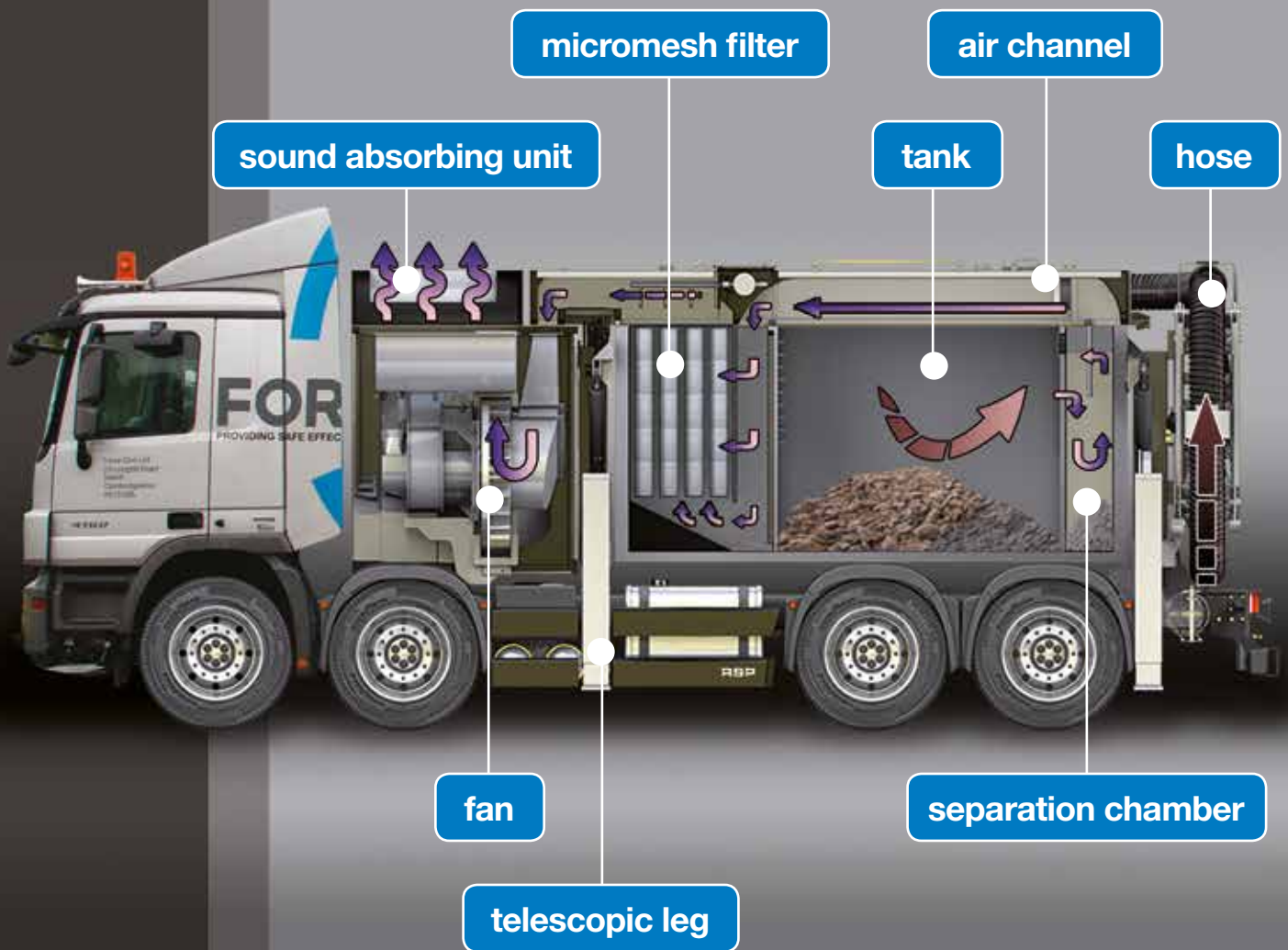
Simply, suction excavation or vacuum excavation as it is often referred to is a safe method of digging using high volume airflow/suction power instead of traditional manual or mechanical digging methods i.e. digging bucket on the arm of a 360 excavator.

Why use suction/vacuum technology?

Safety and risk avoidance. Helps remove the possibility of damage to buried services (cables etc.), possible injury to site staff when hand digging or working in confined space areas. It has many applications and can be used in both depth and distance removal of material.



How does it work?



Creating between 25,000 and 47,000m³ of air flow per hour from the vehicles suction fans. This suction power pulls material into the suction intake hose, through and into the vehicles catchment chamber. Material is stored here ready for tipping/disposal thereafter.

Extension hoses can be attached to our vehicles and the power is such that material, including rubble and house bricks, can be pulled by the fans airflow form horizontal distances of up to 200mtrs and depths of 55mtrs vertically.*

**may depend on vehicle type used.*

Offering you more options.....

Force One Ltd has developed a range of additional services based on “bolt on” equipment that expand the possible applications of suction technology

Its range of 250mm diameter rigid and flexi extension hoses enable its machines to safely move material over distance and from depth. This option means that we can use suction excavation for material removal from restricted access areas, basements, tanks, limited load bearing areas i.e. where placing a mechanical vehicle is not possible. Extension pipes can be used to reach areas along a rail cutting or rail platform to excavate or remove material. The options become almost limitless.....



Peace of mind....

Our operatives have a wealth of experience working across many industry sectors and in carrying out specialist projects. They are amongst the most highly trained and qualified in the industry.

Certificates held include:-

- CSCS
- CPCS
- BESC & PERSONS
- CCNSG
- NEBOSH
- EUSR
- PTS - Rail
- MOD – SP
- Airside Driver Trained

Due to the types vehicles we operate our crews also hold HGV class 1 & 2.

Site assessment and pre commencement meetings are also a regular part of our management team's activity, as is provision of dedicated risk assessments and method statements.

Our combination of expertise and project support provide customers with confidence and peace of mind when using our service.



Additional services solutions now being offered by Force One Ltd...

Our “Bag Pack” system

allows our suction vehicles to tip material into a special dual hopper system and then into suitable heavy duty weight certificated (as per our customers requirements) storage bags.

Ideal if material has to be reused on site.

This is a unique service offered by Force One Ltd

- Containment of material
- Tidy site
- Store on site
- Easy to move around site
- Reuse material
- Range of bag sizes/types
- Weight certificated
- Suitable for grab/fork lift/crane removal

The “Super Tip Skip” system

can be used in a number of ways, either as a high sealable skip for our suction vehicles to tip material into and when full, be hydraulically sealed and removed from site.

Or this specially designed skip can act as a sealed suction slave containment unit. Material can be drawn directly into this unit via attached intake hoses using the suction power from one of our main vehicles. When full this skip/container can be removed from site.

Ideal if dealing with contaminated materials.

- Safe containment of materials
- Hydraulically sealed
- Ideal for contaminated material
- Safe removal from site
- Increases capacity of suction vehicles
- Can be linked to our RN-1 units





The Mini RN-1 unit, aiding distance excavation...

This mini tracked remotely controlled unit works in conjunction with our suction excavators, connected to their main suction intake hose. The unit allows for the safe positioning of the intake nozzle when working at distance - 200mtrs plus - removing manual handling.

The RN-1 unit has a number of configuration options that gives it the flexibility to operate in differing site locations and site conditions. Ideal for: -

- Culvert Clearance
- Tunnel Clearance
- Basement Clearance/Excavation
- Storage/Filter Tank Clearance
- Sub Station works
- Confined space works
- Reservoir works
- Working in areas where exhaust fumes are prohibited
- Bridge excavations (low weight bearing)
- Shipping ballast/storage
- Gully excavation/clearance

Can extend from suction truck to distances of 200mtrs plus

Benefits of using suction/vacuum excavation: -

- Safe method of excavation
- Avoids possible service strikes
- Reduces the risk of injury to digging teams
- Removes the need to place operatives in confined space areas
- Removes the need to place operatives within a trench environment
- Up to six times faster than manual excavation
- Reduces the excavation size
- Results in cleaner excavation point – no spoil
- Reduces number of vehicles on site
- Provides a flexible resource

Services offered: -

- 26, 32 & 41tonne vehicles available
- Remote RN-1 and other mini units available for specialist and distance operation
- New Vac & Bag service
- New sealed containment & removal service
- Distance and depth material excavation

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