

High-Pressure Water Jetting & Desilting Machines

Pressure cuts it loose. Flow is what carries it away.

PRESSURE AND FLOW ARE TWO DIFFERENT TOOLS

Pressure breaks the bond and dislodges what is stuck; flow is what carries it away. The useful quantity is the product of the two, and specifying one without the other is the commonest error in the class. High pressure with low flow cuts a neat hole straight through a blockage and leaves the rest exactly where it was; high flow with low pressure moves loose material happily and slides off anything genuinely bonded. What is being removed decides the ratio, and the ratio decides the pump, the nozzle and the machine.

THE REACTION FORCE IS A SAFETY LIMIT, NOT AN ERGONOMIC ONE

A jet leaving a nozzle pushes back with a force set by flow and jet velocity, and past what a person can brace against a hand lance stops being controllable. A high-pressure jet injures by injection through skin rather than by impact, so a wound that looks trivial from outside can be a surgical emergency. The force is calculated first and it decides the architecture: below the limit, a hand lance with dead-man control and an anti-withdrawal device; above it, machine-mounted or remotely operated.

THE HARD PART IS WHAT COMES BACK

Putting water in is straightforward. Getting water and solids out again is the engineering, and it decides whether a machine is still useful ten minutes into a job: vacuum recovery, solids separation, sludge handling and decanting. On a vehicle it is arithmetic - recovered material is heavy, the tank governs axle loading and legal payload, and the payload decides the chassis. The sum is done full, not empty.

THE MACHINE

- Pump and drive - plunger pump, unloader, relief, flow control, inlet filtration
- Lance, hose reel and nozzles - nozzle selection is tool selection
- Recovery and separation - vacuum, solids out, sludge tank, decanting
- Carrier, control and safety - dead-man, interlocks, guarding, payload sum

VARIANTS

Vehicle-mounted combination jetting & desilting unit · Skid or trailer high-pressure cleaning machine · Shipboard cleaning set · Fixed high-pressure rinsing installation

SCOPE

Ours: machine design and integration, pump and drive package, lance, hose reel and nozzle selection, recovery and separation, sludge handling, carrier or skid integration and the payload arithmetic, controls, dead-man and interlocks, guarding, site survey, installation, commissioning, documentation, training, spares and AMC - including build to the customer's specification. Bought-in certified: the plunger pump, the prime mover, the vacuum package, the chassis. The customer's: the site, the water supply, the material to be removed and its disposal route.

STATUS

Engineered to order. Equipment of this class has been quoted across high-pressure water jetting and desilting requirements for naval, municipal and industrial users; no delivered high-pressure water jetting or desilting machine is claimed.