High-Pressure Water Jetting Systems

Stationary and mobile systems 25 – 1,000 HP
WOMA designs, manufactures and installs complete high-pressure water jetting systems that meet the requirements of the “Richtlinien für Flüssigkeitsstrahler” ZH 1/406, October 1987.

**System programme:**

- High-pressure water jetting systems for service water with power ratings up to 768 kW, operating pressures up to 3,000 bar, and water flow rates up to 900 l/min.
- ARP® water jetting systems for impurified water with power ratings up to 780 kW, operating pressures up to 400 bar, and water flow rates up to 1,680 l/min.
- High-pressure water jetting systems Ecotherm® for hot water with temperatures up to 98°C, power ratings up to 38 kW, operating pressures up to 800 bar, and water flow rates up to 33 l/min.
- Mobile compact high-pressure water jetting systems Ecocold® with power ratings up to 63 kW, operating pressures up to 1,000 bar, and water flow rates up to 38 l/min.
- Ultra-high pressure water jetting units with operating pressures up to 3,000 bar.
- Systems for the simultaneous application of several water tools based on valve-operation or on Twin Jet-operation, respectively.

- Specially designed systems, such as for offshore applications. All systems can be driven either by combustion engines or electric motors. They are suitable for stationary applications as well as for on-site applications. On request, the systems can be delivered with sound absorbing hoods.

Additionally, WOMA produces stationary water jet cutting systems and abrasive water jet cutting systems with power rating up to 60 kW, operating pressures up to 4,000 bar and water flow rates up to 6 l/min.

**Components of the high-pressure water jetting systems**

**Drive:**

- Combustion engine
- Electric motor

**Water supply:**

- Header tank
- Booster pump

**Supply water filter:**

- up to 1,400 bar: 100 µm
- beyond 1,400 bar: graduated

**Pump control:**

- manually
- pneumatically

**Accumulator/Pulsation damper**

- for systems with rigid pipes

**Vibration isolation:**

- for stationary systems with electric drive

**Auxiliary energy for control and tools:**

- compressors

---

**Rubber removal from airport runways**
Environmentally-friendly paint stripping of construction elements

Partial demolition of concrete constructions

Mobile high-pressure water jetting system with combustion engine and high-pressure plunger pump type 550 Z

Stationary high-pressure water jetting system with electric drive and high-pressure plunger pump

Semi-mobile high-pressure water jetting system for sieve and filter cleaning with electric drive and high-pressure plunger pump type 252

High-pressure water jetting system with electric drive and high-pressure plunger pump type 400 ARP®

High pressure water jetting system for off-crash-frame, pressure pump

Environmentally-friendly paint stripping of construction elements

Partial demolition of concrete constructions
WOMA designs and manufactures high-pressure water jetting systems for the following applications:

- Internal cleaning of vessels, autoclaves and containers.
- Cleaning of sewers, pipelines, tube bundles, etc.
- Paint stripping from gridirons and body skids.
- Rehabilitation of structures and buildings.
- Maintenance of buildings and heavy technical equipment.
- Environmentally-friendly surface preparation for corrosion protection.
- Heavy concrete removal and reinforcement bar exposing.
- Emission-free enamel stripping and surface decoating.
- On-site cutting and demolition of constructions and heavy equipment.
Basic Structure · Control Elements

**Basic elements of a high-pressure water jetting system**

- **Valves**
  - TRZ-valves
  - Safety valves
  - Bypass valves
  - Discharge valves

- **High-pressure plunger pump**

- **Power transmission**

- **Drive**

- **Booster pump**

- **Supply water filter**

- **Basic frame**

- **Control device**

- **Multiple-consumer valve arrangement** for ultra-high pressure applications

High-pressure water jetting system with multiple-consumer valve arrangement and high-pressure plunger pump type 400 M

Heavy hydrodemolition of reinforced concrete structures

Turbine cleaning by hot waterjetting
Applications of High-Pressure Water Jetting Systems

1. Cutting and demolition with abrasive water jets, surface preparation with hand-held water tools, decontamination of buildings, cleaning of mortar joints, tube bundle cleaning, paint stripping with robot-guided water tools
2. Surface preparation with Twin Jet-units, exposing of reinforcement bars, concrete hydrodemolition
3. Paint stripping of gridirons and body skids with mechanized water tools
4. Heavy concrete hydrodemolition, Surface preparation with mechanized water tools
5. Cleaning of autoclaves, containers and vessels
6. Cleaning of pipes, high-pressure soil cleaning, water jet assisted pile driving
7. Cleaning of sewers, soil strengthening and stabilization
8. Cleaning with hot-water systems

Delivery Programme
High-pressure plunger pumps
High-pressure water jet systems
High-pressure water tools and accessories

Fields of Application
Agriculture
Automotive and aviation industry
Beverage industry
Chemical industry
Construction and concrete industry
Engineering industry
Food industry
Glass, porcelain, ceramic industry
Iron, steel and metal industry
Mining
Municipal services
Offshore industry
Power industry
Public transport
Pulp and paper industry
Ship building
Wood working industry