



VWALVE

Engineering the Future of Fluid Management

A SMART ENGINEERING TEAM

Who We Are: More Than a Manufacturer, A Solution Partner

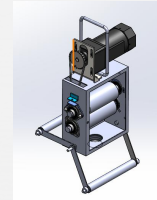
VWALVE

A dedicated team of smart engineers committed to delivering innovative and efficient fluid management solutions.

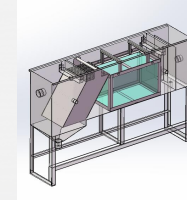
Our core philosophy revolves around “**Modular Design Solutions**”, which allows us to tailor our products to meet the specific needs of our clients across diverse industries.

We pride ourselves on our ability to handle projects of any scale, from individual product design to large-scale facility layouts.

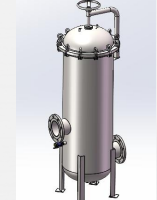
OUR SPECIALTIES



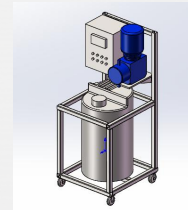
Oil Skimmers



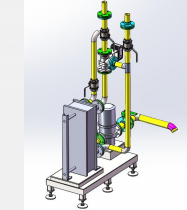
Oil Water Separators



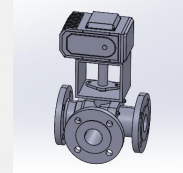
Filter & Housing



Dosing Systems



Heat Recovery Units



Valves & Pneumatics

Our Mission & Vision



Our Mission

To empower industries with smart, modular, and sustainable fluid management solutions that optimize operational efficiency, reduce environmental impact, and ensure long-term reliability.

We aim to be the most trusted engineering partner for our clients by delivering innovative designs and exceptional service.



Our Vision

To become a local leader in the fluid management sector, recognized for our cutting-edge engineering, superior product quality, and unwavering commitment to customer success.

We envision a future where our smart engineering solutions play a pivotal role in creating cleaner and more efficient industrial environments.

Your One-Stop Shop for Fluid Management Solutions

Central Coolant Filtration Systems

High-capacity solutions for maintaining clean and efficient coolant in machining processes.

Oil Skimmers & Oil Water Separators

Advanced technologies for removing tramp oil and separating oil from water.

Filter & Housing Systems

Robust filtration solutions for a wide range of industrial applications.

Dosing Systems

Precise chemical metering and injection systems for process control.

Heat Recovery Systems

Energy-efficient solutions to capture and reuse waste heat.

Control Valves & Pneumatic Components

Precision-engineered components for accurate flow and pressure control.

Central Coolant Filtration Systems

Optimize your machining process with our high-capacity filtration systems. We ensure your cutting fluids remain clean, cool, and effective, maximizing tool life and part quality.

KEY BENEFITS



Extended Coolant Life

Reduces consumption and disposal costs.



Improved Tool Performance

Minimizes tool wear for higher precision.



Enhanced Part Quality

Eliminates surface imperfections.



Reduced Downtime

Automated operation ensures continuous production.



Environmental Compliance

Efficient oil removal meets environmental regulations.



Engineered for Efficiency: Dual Pressure Vessel Design

The heart of our High-Capacity Coolant Filtration System is its innovative **Dual Pressure Vessel Design**, an industry-proven standard that delivers unmatched reliability and uptime.

HOW IT WORKS



Dual Vessel Operation

Two pressure vessels operate in parallel to share the load and maintain flow.



Automatic Switching

The system automatically switches to the clean vessel when one is saturated.



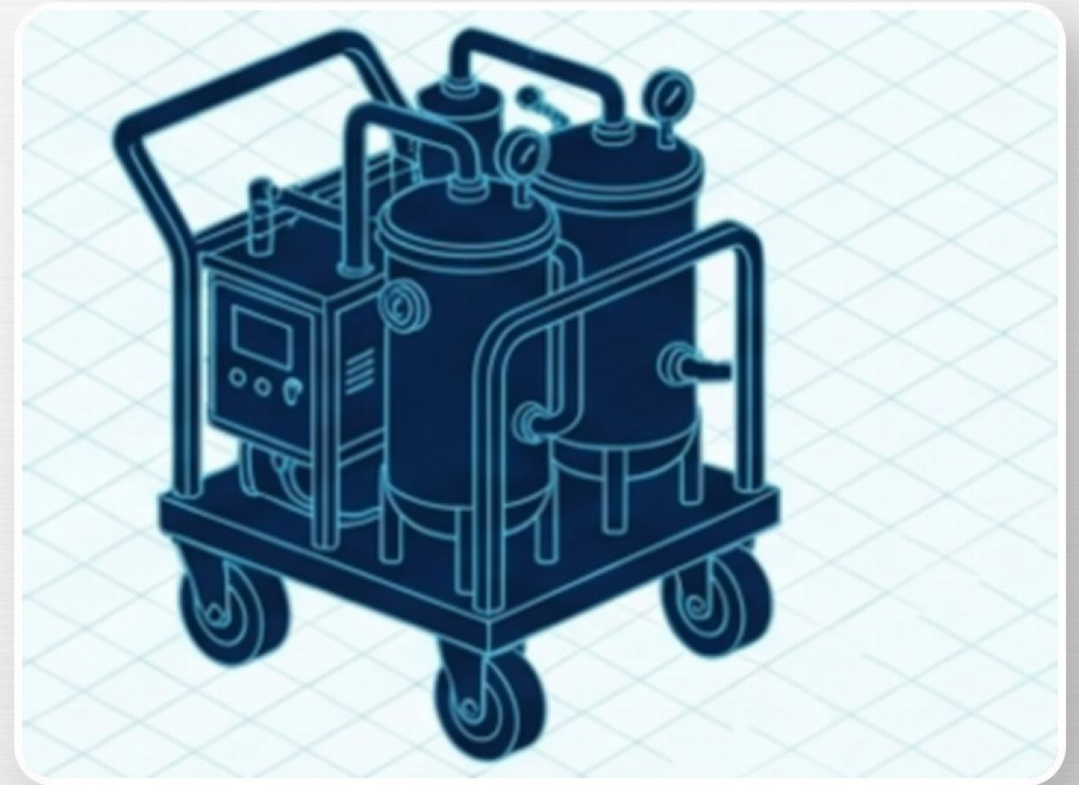
Self-Cleaning Process

The saturated vessel undergoes a high-efficiency backwashing cycle automatically.



Optimized Efficiency

Ensures a constant flow of clean coolant, maximizing the efficiency of your operations.



Dual Pressure Vessel Core Unit

Oil Skimmers & Oil Water Separators



Tramp Oil Skimmers

Efficiently remove floating oils (tramp oil) from coolant, wash water, and other process fluids. Our skimmers feature a simple design with minimal moving parts for reliable operation and easy maintenance.



Oil Water Separators

Utilize coalescing technology to separate emulsified oil from water with high efficiency. Our compact units are ideal for installation in existing systems or as standalone units.

Filter & Housing Solutions

Effective filtration is the first line of defense against wear and tear. VWALVE offers a comprehensive range of filter elements and robust filter housings designed for durability and high performance.



Wide Range of Media

From standard cartridges to specialized media like 3M filter elements.



Robust Housings

Constructed from high-quality materials to withstand high pressures and corrosive environments.



Easy Maintenance

User-centric design enables quick and efficient filter change-outs.



Custom Design

We offer custom filter housing design to meet unique requirements.



Dosing Systems: Precision Control

Accurate chemical dosing is critical for process efficiency and water treatment. VWALVE's dosing systems ensure precise metering and injection of chemicals into your process, minimizing waste and maximizing reliability.



Dosing Pumps

High-precision industrial pumps (e.g., Seko) for accurate flow control.



Control Systems

Automated panels for precise dosing based on real-time process variables.



Make-Up Systems

Integrated modules for automatic fluid replenishment.

KEY APPLICATIONS

Coolant make-up • Wastewater treatment • Process chemical addition





Heat Recovery Systems

Sustainable Thermal Management

Industrial processes generate significant waste heat. Our Heat Recovery Systems capture this wasted energy and repurpose it, leading to substantial cost savings and a smaller carbon footprint.



Heat Exchangers

Efficiently transfer heat from hot process fluids to cold incoming fluids.



Energy Saving

Pre-heating incoming fluids reduces demand for primary heating, cutting energy costs.



Thermal Mgmt

Maintains optimal operating temperatures for machinery.

Control Valves & Pneumatic Components

Accurate control of flow and pressure is essential for the safe and efficient operation of any fluid system. VWALVE offers a comprehensive range of high-quality control valves and pneumatic components, engineered for reliable performance in industrial applications.



Control Valves

Pressure & Flow Control Valves for precise regulation of system dynamics.



Air Pump Valves

Robust pneumatic valves designed to control air-driven pumps effectively.



Diaphragm Pumps

Versatile pumping solutions for handling a diverse range of industrial fluids.



KEY ATTRIBUTES | High Precision • Durable Construction • Wide System Compatibility



Our Engineering & Design Capabilities

At VWALVE, our greatest strength is our **Smart Engineering Team**. We offer comprehensive engineering and design services to support your project from concept to completion.

OUR SERVICES INCLUDE



Facility Design & Layout

Creating optimized layouts for new or existing facilities.



Concept Design & Simulation

Advanced thermal flow simulation & process modeling.



Equipment Detail Design

Developing detailed engineering drawings and specs.



Fabrication

In-house fabrication to ensure strict quality control.





Success Stories

Case Studies in Action



Case Study: Heat Recovery in Auto Parts Manufacturing

Client & The Challenge

- **Client:** A leading auto parts manufacturer with 12 machining centers & a large air compressor.
- **Issues:** Severe waste heat from compressor/machining processes; high cooling costs & energy inefficiency.

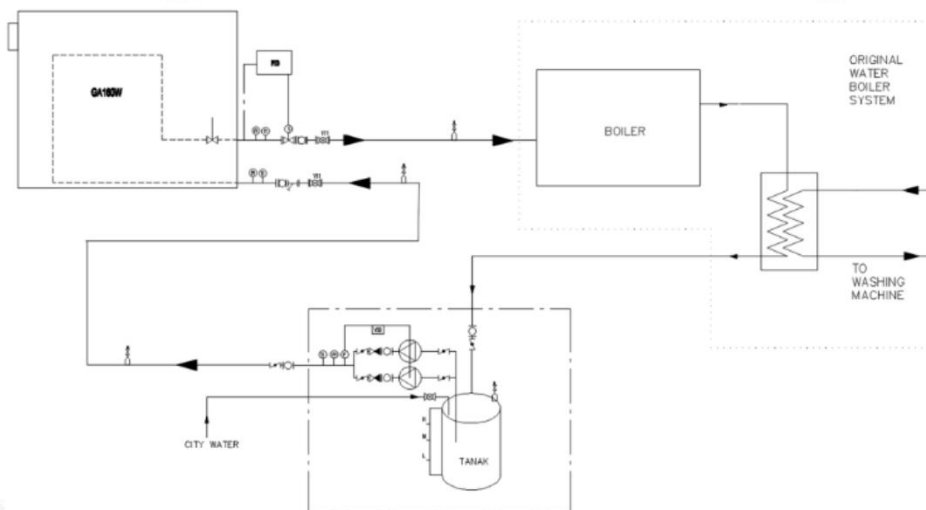
VWALVE's Solution

- Designed and installed a **custom heat recovery system** to capture waste heat.
- Repurposed recovered heat for **factory space heating** and **process water pre-heating** systems.

Key Results Achieved

- **Energy Savings:** Heating consumption reduced by up to **40%**.
- **Cost & Sustainability:** Significantly lower fuel & coolant disposal costs; reduced factory carbon footprint.

IV. Design flow chart for heat recovery unit



Case Study: Oil Water Separation in Washing Plants

THE CHALLENGE

- Oil buildup reduced cleaning bath efficiency and effectiveness.
- Contamination caused poor paint adhesion on final steel products.
- Disposal of hazardous, contaminated solution was costly and unsustainable.

VWALVE'S SOLUTION

- A high-efficiency, automated **Oil Water Separator** was installed inline with the plant's washing system.
- The system continuously extracts accumulated oils from the cleaning solution, maintaining bath chemistry and performance.

KEY OUTCOMES

- ✓ **Quality:** Consistent paint adhesion, eliminating costly surface defects.
- ✓ **Cost:** Bath life extended significantly, cutting down on replacement expenses.
- ✓ **Eco:** Wastewater oil content reduced to meet strict discharge standards.



Case Study: Oil Skimmer Application on site

THE CHALLENGE

- Contamination of cutting fluid (metal powder, floating oil, bacteria) causes accelerated tool wear, emulsion deterioration, and frequent tool replacement.

VWALVE'S SOLUTION

- Install and optimize oil skimmers to remove floating oil and fine particles; monitor and control fluid concentration regularly.

KEY OUTCOMES

Tramp oil controlled at 1.3%; aluminum powder reduced; emulsion stabilized; tool wear and replacement decreased.



Ben :“ It was tested at 100 yesterday, and the emulsion has become much whiter. The tramp oil content has been controlled at 1.3%.”

Trusted Partnerships: Collaborating with Industry Leaders

We believe in partnering with the best to deliver the best. VWALVE integrates components from world-renowned suppliers into our systems, ensuring the highest level of performance and reliability.



For high-performance filter elements that maintain purity.



For advanced sensors and instrumentation for precision control.



For precision dosing pumps that ensure accurate chemical injection.



For reliable, energy-efficient pumping solutions.



For high-performance heat exchangers for optimal thermal management.



Proven Performance

Leveraging the proven reliability of industry-leading components ensures that our systems consistently meet the highest standards.



Global Support

Our clients benefit from direct access to the extensive global service and support networks of our world-class partners.



Continuous Innovation

By integrating components from industry innovators, we ensure that our systems always incorporate the latest technological advancements.

Our Manufacturing Facility: Precision Fabrication

Our state-of-the-art manufacturing facility is equipped with the latest tools and technologies to ensure precision and quality in every product we build.



6KW Laser Cutting

Enables precise, fast, and clean cutting of metal sheets.



CNC Machining

For the accurate production of complex components.



Welding & Fabrication

Skilled welders ensure strong and durable assemblies.



Quality Control

In-process and final inspection stations guarantee strict quality standards.

Flexible Solutions: OEM & Retrofit Services

We understand that every application is unique. VWALVE offers flexible services to adapt to your specific requirements.



OEM Services

- We provide friendly OEM (Original Equipment Manufacturer) services, manufacturing components or complete systems to your specifications.
- Our engineering team can work closely with your design team to ensure seamless integration of new parts into your existing assembly lines.



Retrofit Services

- Breathe new life into your old machinery with our retrofit services, designed to enhance reliability and efficiency.
- We can upgrade control systems, replace outdated mechanical components, or integrate new technologies to improve performance and significantly extend service life.

Let's Engineer Your Solution Together



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