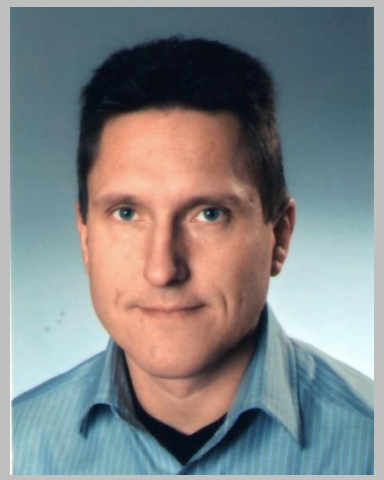

KTW SYSTEMS
DRIVEN BY INNOVATION

Our Team Members

"Engineers from Aerospace, Formula1 and Defense and international experienced Managers"



WOLF TEICHMANN

CEO

International successful Manager

NORBERT KREYER

PROJECT MANAGER

Extreme succesfull career in racing and aviation
Engineer Formula1

STANISLAV KOPECEK

COO

Chemical Engineer with wide field of experience in Defense and Automotive

KAUS WEBER

MANAGER R&D

Innovator of KTW SYSTEMS
Aerospace Engineer
Expert from DLR,Cologne

LAN LIN

GM ASIA & PACIFIC

Sales Profi with a huge network.

Fast Switching Valves

We redefine the terms "fast, flexible and realiable” for valves

Problem in the valve market:

Missing flexibilty, high complexity and less cost efficient use

Wherever liquids and gases need to be measured, controlled and regulated, a valve is used!
The market for valves is huge and confusing.

There is a separate valve for nearly each application. As a rule, it is already differentiated, for example, whether water or oil, steam or gas, compressed air or aggressive media are to be regulated. Within these applications, a distinction is then made according to the necessary flow and the pressure requirements. Not infrequently, a valve manufacturer has several hundred valves on offer.

The life cycle of these valves is limited by their spring, spindle or needle system and they need a periphery to work.

Solution:

We introduce a new generation of valves with a dose range, which is 1000 times higher as conventional valves

KTW SYSTEMS has the answer to all the existing problems in the valve market.

Our valves can be used wherever a flow is present, regardless of whether it is air, gases, water or viscous media, including a wide range of pressure and flow

Flexibility, cost-efficiency, long life only a few advantages! Our valves make new applications possible, increase the efficiency and decrease the costs in production processes.

The valve technology is patented
and we are the licensee

The fastest valve on earth?

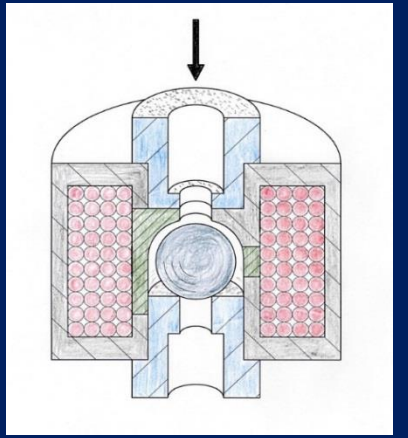
Unbeatable in reliability, flexibility and life time

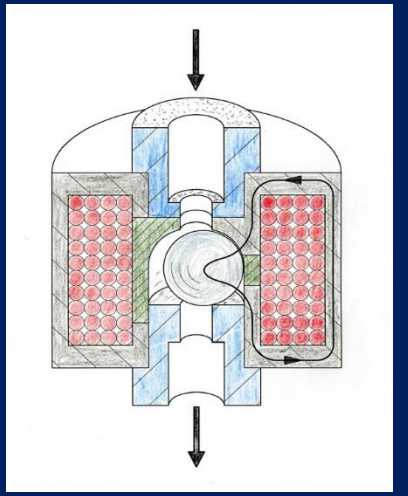
Fast and direct switching valve with a magnetized ball as a closure element for gases and liquids.

The pressure difference between the valve inlet and the outlet keeps the ball in the valve seat.
The ball is the only moving part of the valve. For the opening of the valve, a magnetic field is generated by the magnetic coil, which let force acts laterally on the ball and the ball rolls from the valve seat.

Without a magnetic field, the flow returns the ball back to the valve seat, the valve closes.

The magnet system, the valve seat diameter and the diameter of the valve ball determine the characteristics of such a valve, which can easily be adapted to different requirements by varying these parameters. This also results in a wide application field for this type of valves..



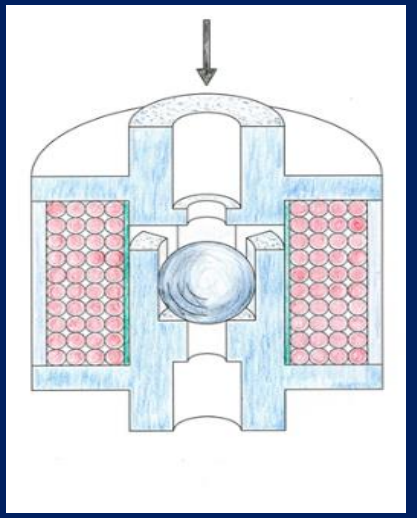


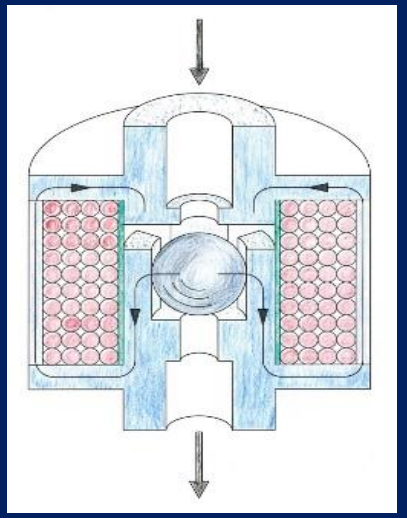
The innovation in the valve tech

New technology: Three Pole Valve

In solenoid valves with three-pole technology, the closure element, here a ball moves when energizing the solenoid to open the valve, between two poles of equal magnetic poles in the direction of the magnetic opposite pole.

The sketch shows a three-pole valve in the closed and open state. The three-pole valve has the advantage over a two-pole valve that the magnetic resistance is lower and thus a three-pole valve works more efficiently than a two-pole valve.





Product features/ USP

Our valves are extremely flexible and replaces a large number of individual solutions

Our Valves don't have the disadvantages of needle or spring systems and convince through an extreme long life time - tested are more than 3bn switching cycles due to low friction an minimal mechanical load.
In addition no hydraulic system is required.
Only this facts lead to high cost savings in the production process

1. **EGG LAYING WOOL MILK SOW**
   Suitable for all gases and liquids, heat and cold resistant (plus / minus 200 degrees Celsius), usable for pressure control
2. **LARGE DYNAMIC RANGE**
   100 nl / min to 5l / min in one component; dose range is 1,000 times higher as conventional valves
3. **FAST SWITCHES ALLOWS HIGH FLEXIBILTY**
   extremely fast (1ms), direct and stochastic switching, which allows real time applications
4. **WE LOVE PRESSURE**
   Pressure range from 0.5 bar to 1.000 bar
5. **COMPACT DESIGN**
   Easy to clean, corrosion-resistant and requires no lubrication; regulating and self-locking in one (permanently technically dense)
6. **FREQUENCIES UP TO 1000 HZ**
   By pulse width modulation the flow can be controlled linearly
7. **WE DON`T LIKE FAILURES**
   No resonance frequencies

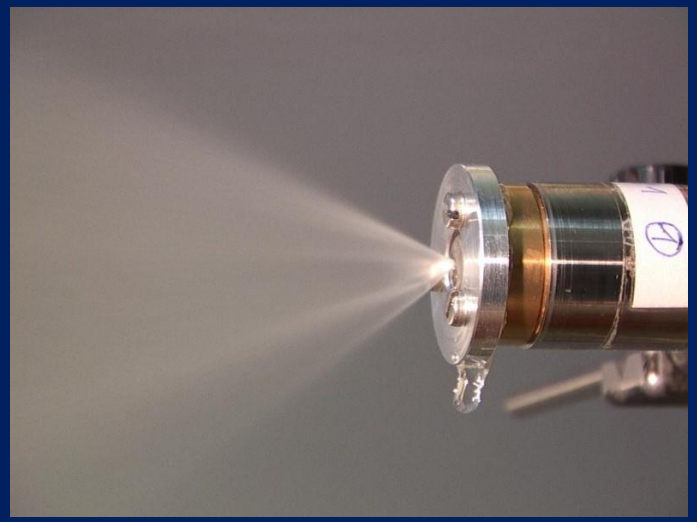
Customer and Market

Only for high quality requirements

Sample Application

- Water supply > Drinking water treatment
- Chemical > Cooling, lubrication and dosing
- Blood Analyzers > Control of the cleaning processes
- Sterilizers > Control of steam sterilization
- Shipbuilding > Control of diesel and auxiliary fuels
- Engine Tech > Water direct injection
- Pharmaceutical > Filling of infusions, eye ointment etc.
- Agriculture > Control of plant protection consumption
- Military -> Momentum valve for UAV´s to open parachute
- Aerospace-> Pressure vessels in launchers
- Power plants, Tanks, Aeroplanes, Submarines, Helicopter -> Emergency cooling valves
- Steel industry -> Spraying of chemicals and gases
- Beverages -> Filling process

From the welding robot to the waterworks, from dedusting in opencast mining to the cabin pressure control in the airplane - everything is possible with our valves as a reliable component



Customer & Markets

Green Project

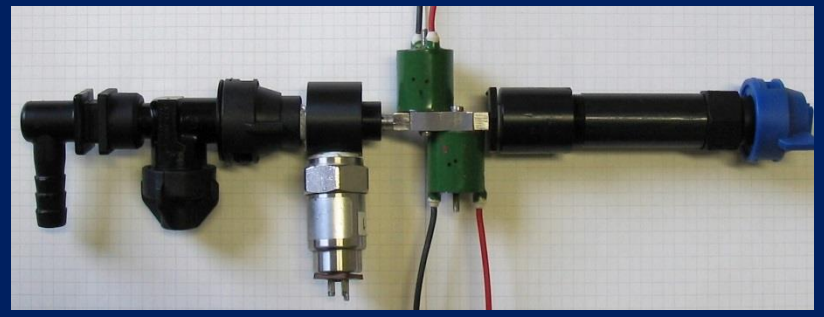
Application: Crop protection consumption

Valves for sensor controlled extraction.

This project is very promising, because the valve is able to switch fast and stochastically!

It has an enormous impact on the consumption of plant protection products and the protection of the environment

real-time capable dosing unit:



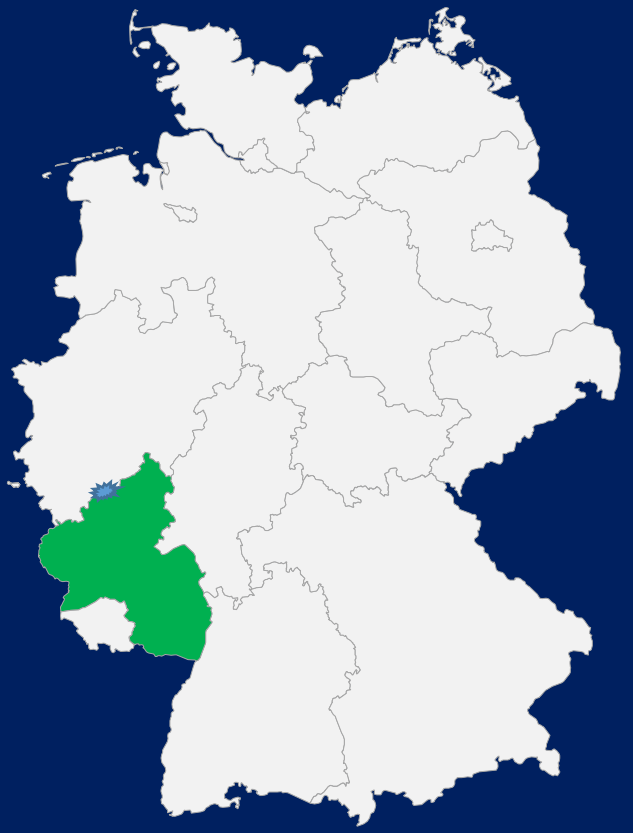
Application of the crop protection agents on dosage units in a spray bar

Processing the sensor data to a control unit

weeds detection by the camera and image processing

Thank You.

The best way to predict the future is to invent it



Get in Touch

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