

GATHER Metering systems

Metering systematically



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www.gather-industrie.com

More than 50 years of experience

In-depth knowledge, broadly diversified solutions

GATHER Industrie GmbH is a medium-sized family business based in Wülfrath, North Rhine-Westphalia – with more than 50 years of experience and a focus on quality and innovation.

As a premium manufacturer of magnetically coupled gear pumps, metering systems and quick connect couplings for pipes and hoses, the company serves numerous industries and customers, e.g. the chemical, pharmaceutical, medical and food industries. With their expert knowledge in handling non-lubricating liquids, GATHER offers solutions which enable the customer to work with process reliability and durability.

From the “idea to series production”, GATHER Industrie develops not only standard products but also completely new technical solutions according to customer requirements. At the same time we succeed in managing the balancing act from single pieces to the production of small and large series for OEM customers.



1965

Foundation

50+

Employees

30+

Countries

The GATHER products



Metering and process pumps



Metering systems



Couplings

Pump, controlling, sensor technology – All in one station

Proven pump technology, integrated controlling and regulation as well as flow and pressure measurement in one station. This is what GATHER delivers in the new compact GDS metering station. All components are integrated in a stainless steel housing to save space.

As a “plug-and-play solution”, the lightweight and mobile metering station is suitable for many applications. With the integrated control software and the user-friendly interface, any metering and conveying task can be implemented quickly and easily.

TECHNICAL DATA Metering station GDS

Flow rate	Q = 30–3,000 ml/min*
Measuring method Q	magnetic-inductive
Differential pressure	Δp = up to 10 bar
System pressure	p_{sys} = up to 16 bar
Viscosity	η = 1–150 mPa s (cP)
Temperature liquid	T = 0 to +60 °C
Ambient temperature	T = 0 to +40 °C
Dimensions [WxDxH]	350 x 450 x 390 mm
Weight	approx. 19 kg
Supply voltage	230 V, 50 Hz

*dependent on gear pump used



Characteristics

Metering station GDS

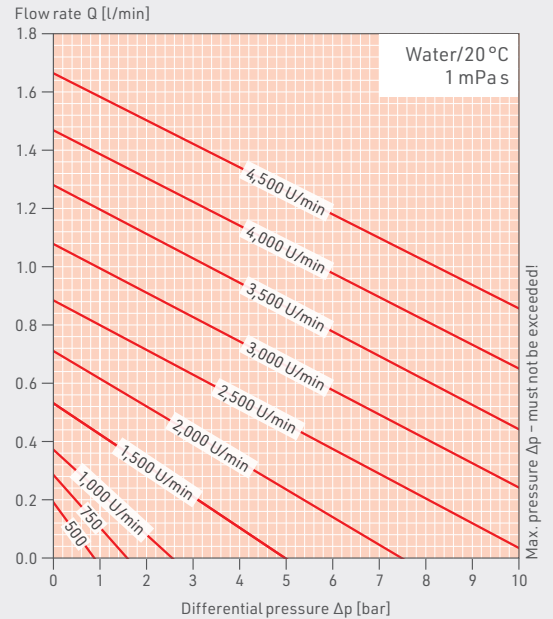


Advantages at a glance:

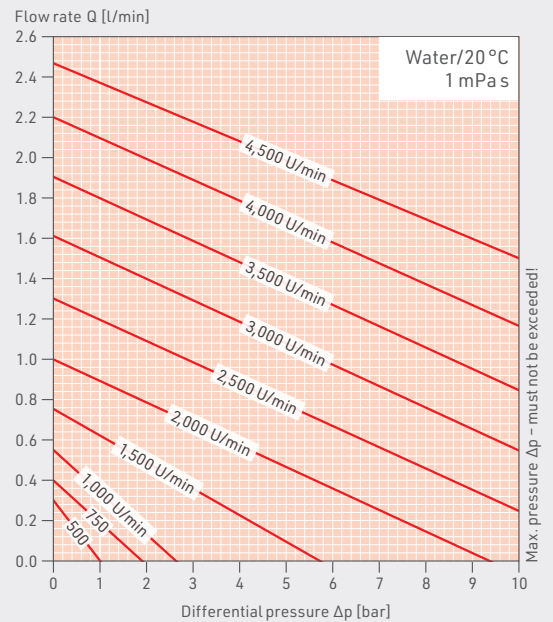
- + available with all GATHER laboratory gear pumps* of series 1 (LAB-ZP-6, LAB-ZP-9 and LAB-ZP-12)
- + magnetic-inductive flow measurement
- + integrated pressure sensor
- + precise metering of small quantities of liquid
- + mobile and easy to transport
- + integrated expandable PLC
- + simple surface operation via 7 inch HMI
- + Autotuning to determine controller parameters (PID)
- + batch function available upon customer request
- + special configurations and special interfaces on request

*special configurations on request

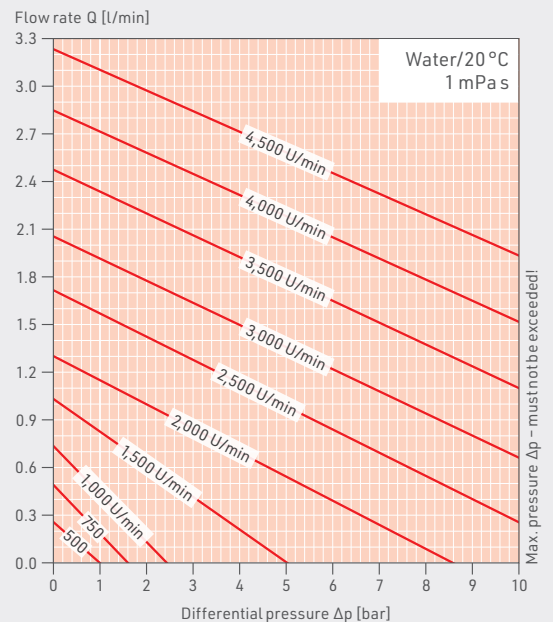
LAB-ZP-6



LAB-ZP-9



LAB-ZP-12



The universal controller for all pump and control loops

GATHER's Metering box 5000 with integrated, universal PLC enables exact conveying, metering or filling at the push of a button. It is suitable for all applications where pumps are operated in a loop system.

The simple interface operation enables rapid commissioning of a wide range of metering and measuring tasks. After input fewer parameters of the sensor an automatic algorithm identifies the control loop parameters (PID-Controller).



Characteristics Metering box 5000

Advantages at a glance:

- + easy to use interface and handling ("Plug and Play")
- + no programming skills required
- + autotuning for determining the control parameters (PID)
- + simple integration into any control loop, applicable for all dosing tasks and measuring systems
- + both continuous metering and batch filling possible
- + functionality independent of liquid viscosity
- + integrated "master-slave"-function
- + integrated wear warning & fail-safe function
- + applicable to all pumps (with pulsation-free delivery characteristics)
- + special interfaces on request



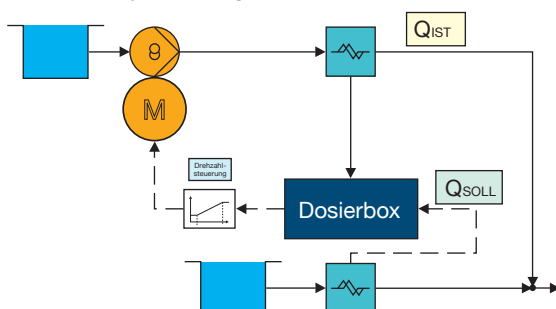
Control loop / measurement system:

- + volume flow (e.g. MID, Turbine)
- + mass flow (Coriolis)
- + pH-value
- + pressure
- + gearwheel counter or oval gear counter

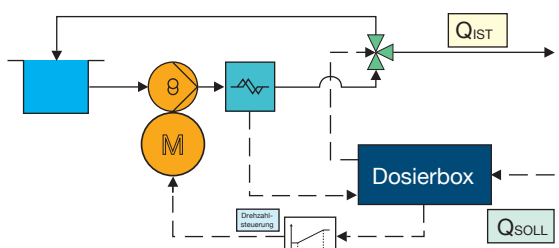
Only two requirements for the pump:

- + pulsating free characteristics
- + variable speed drive

continuously metering



Batch-Filling



Continuously metering and batch filling are possible, independent on the measurement application. All input/control values can be set and adjusted via the surface.

Standard interfaces for digital storage and operating via PC are available.

Standard inputs and outputs Metering box:

- inputs: 2x analogue (0-10 V, 2-10 V, 0-20 mA or 4-20 mA) and 2x digital (impulse and start/stop)
- outputs: 2x analogue (0-10 V, 2-10 V, 0-20 mA or 4-20 mA) and 2x relay
- electrical connection: 230 V, 50 Hz

GATHER Modular rack design

Development, assembly and manufacturing from a single source

With decades of experience in the chemical, pharmaceutical, medical and food industries, we can offer complete system solutions from a single source and supply individually modular systems.

These solutions include transfer, measuring and monitoring as well as process control with our GATHER Metering box 5000.



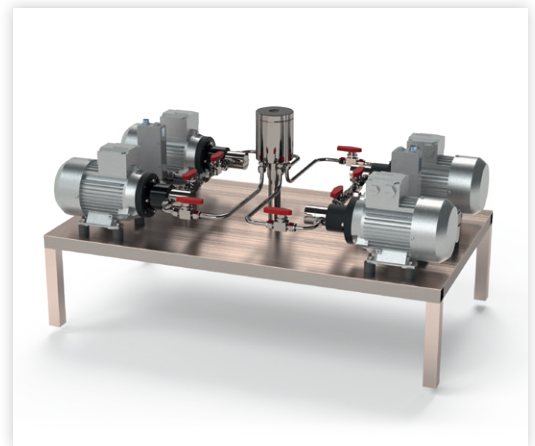
Characteristics

Modular rack design

The profiles used are variable, modular and can be used in a wide variety of configurations. With this flexibility, we are able to respond to the respective application in a cost-sensitive manner and provide the customer with the best possible system configuration in terms of installation space as well as selection of materials. Due to the modular approach, we can offer high-quality and expandable racks quickly and at a reasonable price.

Advantages at a glance:

- + development, assembly and manufacturing from a single source
- + grooved profile systems in stainless steel or aluminium
- + modularly expandable
- + customized welded constructions in stainless steel design
- + engineering advice on site



Use in all sectors of industry – GATHER has the solution!

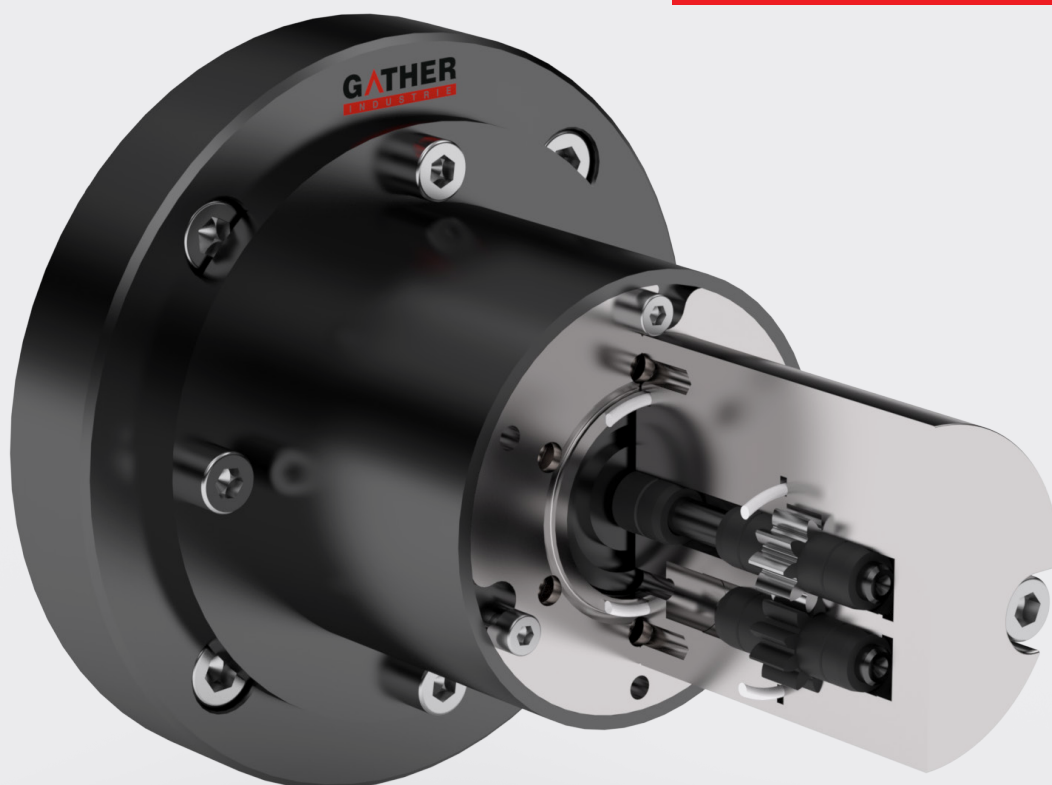
GATHER products are used in almost all sectors of industry. Wherever precise coupling, delivering or dosing of liquid matters. Whether lubricating or non-lubricating, whether low-viscosity or viscous, whether coupling, pump or complete system (incl. pump control loop).

Our engineering is your solution!

Depending on the geometric design, construction and material selection (bearings, gear wheels, seals, etc.) the **following operating ranges** can be covered:

Magnetic drive pumps

Volume flow rate	20 ml/h to 4,000 l/h
Differential pressure	up to 20 bar
System pressure	up to 325 bar
Temperature range	-200 to +450 °C
Viscosities	0.1 to 2,000 mPa s (cP)



Liquids for every industry and application



Chemical and Process Engineering

- + Water
- + Saline Solutions
- + Caustic Soda
- + Sulfuric Acid
- + Hydrochloric Acid
- + Formic Acid
- + Nitric Acid
- + Phosphoric Acid
- + Alcohols (Methanol, Ethanol, Toluene, Xylene, etc.)
- + Tetrahydrofuran (THF)
- + Resins
- + Hydrocarbons
- + Barrier fluids for Double-Action Mech. Seals GLRD



Pharmaceutical and Cosmetics Industry

- + Nutrient solutions
- + Dyes
- + Perfumes
- + Hydrogen peroxide/H₂O₂
- + Vinegar essence
- + Enzymes
- + Various alkalis and acids
- + Cell fluids
- + Silicone oil



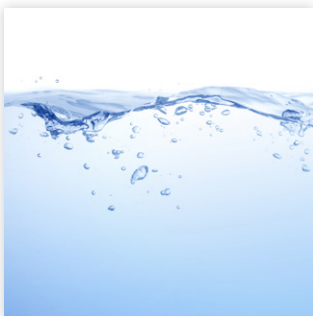
Medical Technology

- + Water
- + Active ingredients
- + Vaccines
- + Adhesives



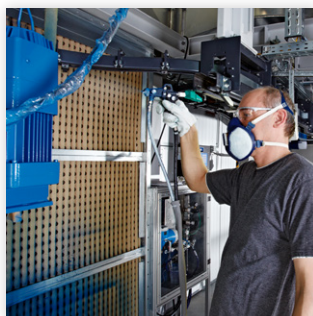
Food Industry

- + Vegetable oils
- + Cooking fats
- + Yeast solutions
- + Fish oils
- + Nitric acid
- + Citric acid
- + Caustic sodas
- + Sulfuric acid
- + Tetrahop
- + Isohop
- + Caramel
- + Essences



Water Management

- + Caustic Soda
- + Sodium hypochlorite
- + Hydrochloric acid
- + Iron (II) Chloride
- + Iron (III) Chloride



Automotive Industry

- + Paints and varnishes
- + Petrol
- + Diesel
- + Kerosene
- + Additives for fuels
- + Cooling liquids



Steel Industry and Power Plants

- + Ammonia water
- + Urea (Adblue)
- + Cooling liquids
- + Water



Oil Industry

- + Crude oil
- + Petrols
- + Kerosene
- + Diesel
- + Solvent Yellow 124
- + Thermal oil
- + Various additives



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Why GATHER Metering systems?

GATHER also supplies complete metering systems as solution according to ATEX for zone 1 and 2. This includes the conceptual design and selection of all components of the pump control loop according to customer specifications.

Possible conceptual designs:

- + both "stand-alone systems" and integration into existing process systems
- + control electronics in pressure-capsulated design according to EN 60079-1
- + ATEX zone 1 and 2
- + integration of safety monitoring, e.g. dry-running, overpressure, over-heating, etc.
- + universal controller (GATHER Metering box 5000) for continuous metering or batch filling
- + compact Metering station GDS ("Plug and Play")
- + modular rack design according to customer specifications
- + engineering advice on site

Our sales engineers and partners have extensive expertise and application knowledge and are your contacts. Either on-site at your premises or at our head office in Wülfrath.