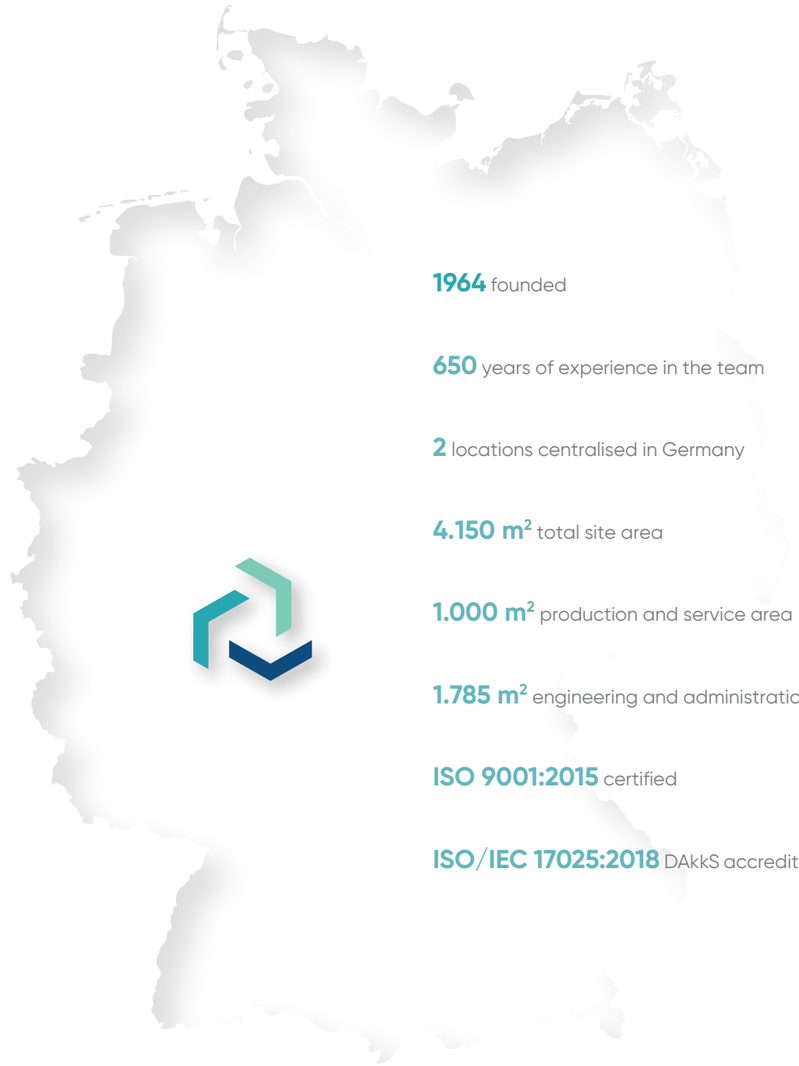
FLUSYS
FLUID CONTROL SYSTEMS

Fluid Control Systems
PRODUCT OVERVIEW

MEASURE & CONTROL
WITH SYSTEM



1964 founded

650 years of experience in the team

2 locations centralised in Germany

4.150 m² total site area

1.000 m² production and service area

1.785 m² engineering and administration area

ISO 9001:2015 certified

ISO/IEC 17025:2018 DAkkS accredited

We are here to support: We are happy to provide you with expert, solution-orientated advice so that you receive a customised solution for your requirements.

FLUSYS GmbH

Heinrich-Krumm-Straße 8
63073 Offenbach, Germany

Phone: +49 69 450916-500

info@flusys.de
www.flusys.de

Corporate Group

Our corporate group consists of three legally independent companies, Wagner Mess- und Regeltechnik GmbH, FLUSYS GmbH, and H2SYS GmbH. Together, we form a core competency team and can individually meet a wide range of customer requirements. From technical conception to a fully-fledged system, we are the partner for implementing demanding customer projects. Our expertise lies in the precise measurement, dosing, and control of gases, liquids, and vapors in all pressure and temperature ranges.

WAGNER
MESS- UND REGELTECHNIK

The Wagner Mess- und Regeltechnik GmbH is a leading and accredited company in Germany for measurement and control technology. We specialize in precise mass flow measurement as well as dosing of gases and liquids.

FLUSYS
FLUID CONTROL SYSTEMS

The FLUSYS GmbH is an established provider and producer of test benches and mixing systems of all kinds for gases, liquids, and vapors. From simple assembly to complex overall systems, we deliver comprehensive solutions for our customers including planning, documentation, risk assessment, and software.

H2SYS
HYDROGEN SYSTEMS

The H2SYS GmbH develops and distributes innovative testing and test systems for electrolyzers, fuel cells, and their components for the global hydrogen market. Our focus is on safety, flexibility, and reliability.

For over 60 years, we have been advising our innovative high-tech customer base on their tasks and collaboratively developing solutions together. As diverse as our products and solutions are, so are our customer industries and markets: Our customers are located in industries such as vacuum and semiconductor, chemical and automotive, mechanical engineering, as well as in the entire R&D sector. Measuring and controlling flowing media is our strength.

History and Origin

In 1964, graduate engineer (TU) Philipp Wagner laid the foundation for our present-day corporate group with his engineering office. Over 60 years, we have grown to become one of the leading German corporate groups in the development, consulting, distribution, and service of products such as mass flow and pressure measurement technology, setting new standards every day together with our customers and partners.

We place great value on long-term and fair customer relationships, as well as on a partnership-based collaboration with our suppliers. Particularly noteworthy is our successful and innovative partnership with the renowned company Bronkhorst High-Tech B.V. from the Netherlands, which has been based on trust and reliability for over 40 years.

Our dedicated team of competent and motivated employees works together with our partners to find the optimal solution for your individual measurement and control requirements. Because your success is our goal.

From the task assignment, through individual devices to complete systems or test benches, from repair services to calibration services (ISO 17025 DAkkS) - you benefit from our many years of experience and reliability. More than 100,000 devices and solutions have been delivered to over 7,000 customers from various industries, such as semiconductor, medical, vacuum technology, chemistry, plant engineering

1964 Foundation of the engineering office Philipp Wagner

1981 Exclusive partnership with Bronkhorst High-Tech B.V

1987 Foundation of Wagner Mess- und Regeltechnik GmbH

2002 Certification according to DIN EN ISO 9001:2000

2010 Construction and occupancy of the new company building at Otto-Scheugenpflug-Straße, Offenbach.

2011 Foundation of Flusys GmbH from the system construction division of Wagner Mess- und Regeltechnik GmbH.

2013 Start of the calibration system for process gases such as H2, CH4, He, etc.

2014 Founder Philipp Wagner retires at the age of 92. Managing Director Carsten Neutzer takes over all shares in the company.

DAkkS accreditation of our calibration laboratory in accordance with DIN ISO/IEC 17025 for gas flow including hydrogen

2020 Purchase and preparation of the second location in Offenbach am Main

2021 DAkkS accreditation of our calibration laboratory according to DIN ISO/IEC 17025 for gas flow velocity.

2023 Foundation of H2SYS GmbH

2024 Company anniversary: 60 years Wagner Mess- und Regeltechnik GmbH

Corporate Group and History

The Partner For Your Innovation

You are facing a technical challenge and need a solution in the field of measurement and control technology. From the idea to the complete system, we are the partner for your innovation. From analyzing and sketching your requirements, through technical design and component determination to the realization of complete systems including PLC control, we accompany you in your project. In addition, our service and calibration laboratory ensures lasting reliability and durability of your devices. With our expertise and broad-based corporate group, we can meet a wide variety of customer requirements individually. Let us together make your project a success.

Analysis and Consulting

Together with you, we analyze your task, the associated requirements for measurement and control technology and develop an initial solution approach.

Technical Design

After jointly defining all technical specifications and framework parameters, the technical design is carried out. According to the elaborated specifications, necessary components for your project as well as the overall technical process are already worked out.

Sales

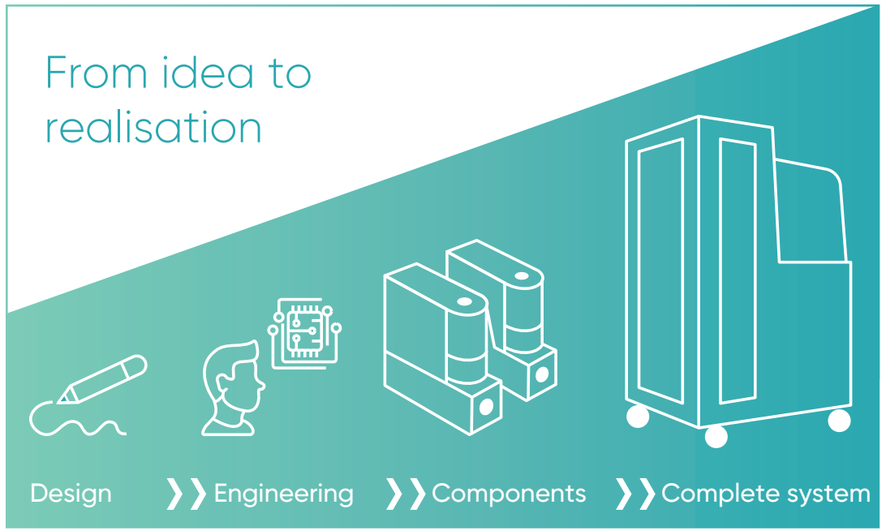
You will receive certified and ready-to-use components of measurement and control technology from us for realizing your project.

System Construction

If you do not only need individual components for independent implementation but also wish for piping up to a complete system, we are at your side as a solution provider with our system construction division.

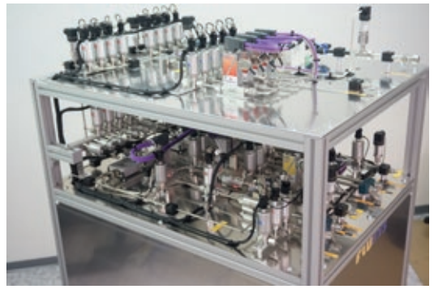
Service & Calibration Laboratory

To ensure reliability and durability of your measurement & control technology after commissioning, our service & calibration laboratory can maintain, calibrate & adjust your devices & instruments when needed.



CVD Silan -Chlorine Gas Distribution - orbital welded

Gas Mixer ATEX Zone 2



Fully automated high-pressure leak testing system

Special Solutions · Engineering – Made in Germany

Engineering – Made in Germany

You have the task - we develop the solution, test bench or production tool together with you.

We offer tailor-made turnkey solutions from a single source. Benefit from the mechanical, electrical, software and process engineering expertise of our engineers, technicians and fitters. All systems are tested according to VDE guidelines and with pressure and helium leak tests. CAD planning, training and detailed documentation creation for software, E-PLAN circuit diagram creation and control cabinet construction are a matter of course.

The scope ranges from simple assembly of components to complex test bench systems with programmed PLC/PLS, embedded PC and safety considerations. We support you from the beginning to completion of your project with:

Feasibility Analysis & Conception

Individual early support in your planning. Developing technical solutions based on existing systems and experiences. From sensors to actuators to automation.

Hazard/Risk Assessment

Repeated consideration of all risks associated with functionality is our true strength. Risk assessment according to DIN EN ISO 12100:2011-03 and EN 60204-1:2006 forms the basis

ATEX-Consideration/Ignition Hazard Assessment

When working with flammable fluids, one must consider and apply the ATEX DIN EN 1127-1:2011-10 standards for explosive atmospheres! Planning such systems often involves unforeseen additional requirements and measures. We assist in determining or creating these assessments.

Electrical Design/Control Cabinet Construction

Planning, construction of control cabinets & wiring; testing all components according to common low-voltage directives. Electrical design is done using E-PLAN® software.

Mechanics/Piping

The usual setup uses aluminum profile technology systems in panels, racks, boxes or cabinets; piping mostly in stainless steel pipes or hose systems. Connections are made using high-quality fittings suitable for pure media or orbital welding processes.

Customized Software

Every system/test bench is unique; you benefit from prefabricated functional modules that can be adapted as new tasks arise for each new project. New tasks are added to almost every new project. We offer you the software and visualisation solution from a single source. Programming is carried out on PLC, PC, embedded PC or microcontroller basis in: Structure text (ST), C/C++, VB/VBA or all common PLC programming languages.

Documentation

We work with state-of-the-art CAD layout programs & document management systems ensuring seamless documentation & secure archiving throughout project development until completion.

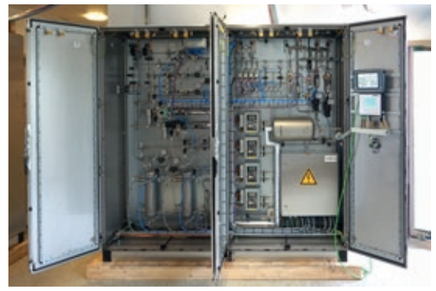
Start-up

Systems are usually delivered "plug & work". This includes commissioning activities like personnel training & remote troubleshooting support through maintenance contracts.

Sample Applications

- Installation on panels or in boxes
- Gas mixing systems
- Humidification systems
- Catalyst test benches
- Leakage testing systems
- Oven controls
- Laboratory controls
- Endurance test benche
- Production-supportive systems
- Quality inspection

Automated Leak Testing Unit for H_2 applications



Evaporation and Solvent Vaporisation - Humidification

Fluid cabinet - orbitally welded or piped with clamping ring

SIL monitored Gas Mixing Systems

Assembly Production

Special Solutions· Engineering – Made in Germany

FLUMIX Inert – Industrial Gas Mixer

The FLUMIX gas mixing controller precisely regulates & monitors your gas mixtures over a wide dynamic range.

Touchscreen operation & visualization, valve switching, rinsing processes for corrosive operations, safety monitoring & shutdowns are standard. Mixtures can be generated from at least two gases up to six gases.Constant concentrations ranging ml-liters/cubic meters maintained via self-developed cascade control circuits.

Specifications

Gases	All non-flammable gases that are compatible with stainless steel (e.g.: Ar, O_2, N_2, He, CO_2, Kr, Xe, others on request)
Mixing Range	Flammable gases optional on request with FLUMIX ATEX
Pressure Range	0 bis 100 % (ppm or PPT on request)
Inlet Pressures	Standard 0.5 to 8 bar (depending on supply pressure - higher on request) up to 16 bar (usually 3 bar higher than the desired supply pressure)
Ambient Temperature	0–50 °C
Power Supply	230 Vac / 3A
Accuracy	Silver better 0.85 %, gold better 0.65 %
Extraction Quantities	Low: 0 to 5 ln/min Medium: 0 to 50 ln/min Mid High: 0 to 250 ln/min (with or without external buffer mode) High: 0 to 1600 ln/min (without or with external buffer mode and other housing dimensions) Super High: On request
Dimensions in mm	800 × 600 × 300 (height × width × depth)
Connectors	Usually 6 mm or 12 mm compression fitting (VCR or similar on request)
Approvals	CE conformity in accordance to Maschinenrichtlinie 2006/42/EG

Product Details

- Precise and repeatable automated mixing of up to 6 gases
- Stable supply pressures with continuous and cycled gas withdrawal
- Fully automatic operation with maximum safety
- Plug & Play-Mode
- Integration into existing system controls possible
- Compact and high-quality design
- Optional: FLUMIX ATEX

Advantages

- Extremely simple operation via a touch panel
- High measuring and analysis accuracy of the gas mixtures
- Fully automatic and safe operation
- Stable pressures for synchronised sampling thanks to integrated buffer tank
- Maximum accuracy thanks to preselectable cascade connection
- Interfaces for Profibus, Profinet, EtherCAT and Modbus available
- Automatic flushing system to avoid cross-contamination
- Special customisations for customer requirements can be made by us at any time and at a later date

Products · **FLUMIX Inert – Industrial Gas Mixer**

Properties

Do you need a gas mixture in different quantities and safely mixed on site from individual gases? Gas mixing has never been so easy! The only basic setting you need to make and pre-select is:

Activate or deactivate in the menu:

- Rough expected withdrawal quantity
- Concentration in % or ppm
- Purge and alarm processes
- Assign gas types and names
- Specify desired outlet pressure
- Define limits if necessary
- Activate and deactivate alarm limits
- Buffer operation (for fast cycles or continuous operation)
- START and STOP via keyboard or external controls

Applications

- Production of own gas mixtures and thus replacement of ready-mixed gases
- High-purity gas supply for systems and machines in the semiconductor, glass fibre and coating industries
- Harmful gas generation in analytics or for catalyser applications
- Gas mixture production in the food industry or for oven technology

WALECK: Leak Test System For Universal Applications

With the WALECK leak test system, the tightness of fuel cells, tanks, valves and hollow bodies of all kinds can be easily tested. WALECK can be used either directly as a "stand-alone" table unit or in the Plus version as an active unit in higher-level controls, e.g. integrated into production processes with predefined test cycles.

Depending on the application, WALECK can be used for leak tests using both the relative pressure and differential pressure (pressure drop) test methods. The automatic, rapid filling of the test specimen is carried out via pressure regulators and precisely calibrated mass flow meters. The intelligent cascade switching to the ideal measuring range of the integrated mass flow meter is realized by an embedded PC (PLC). Intuitive evaluation and operation are done via a touchscreen control panel. Leakage is indicated in mln/min or mbar l/sec. Typically, testing is done with N2 or compressed air. Testing in special systems directly with hydrogen or helium is possible in custom construction.

To obtain a quick measurement, the volume of the test specimen is determined beforehand to achieve a faster measurement cycle. In addition to fully automatic execution, economical systems with manual pressurization are also available. For characterizing pumps or KV values, WALECK is used to record pressure/flow characteristics.

For compact assemblies, automated system tests and test cycles from port to port can be specified automatically.

Advantages

- Easy operation via external start signal or touchscreen
- Fast and precise determination of leakage
- Multiple test sequences storable as recipes
- External control connection
- Output and storage of all measured values/protocol via Ethernet interface (FTP) or RS 232
- High universal dynamics through automatic measuring range switching
- Touch operating terminal with characteristic representation and logging
- Testing under real pressure conditions possible
- Clear characterization of specimens (OK/not OK)

Excerpt of Applications

- Fuel cells and stack manufacturing
- Electrolysis cell manufacturing
- Tank and storage systems
- Drive units, engine components
- Vehicle components of all kinds
- Hose connections
- Valves, machine parts

Products · **WALECK – Leak Test System**

Pioneering Testing Systems for Fuel Cells and Electrolyzers

Hydrogen Test Systems – Single Cells & Stacks

We offer systems for testing individual cells up to complete stacks. Our CE-compliant facilities in modern and compact enclosures are characterized by their simple operation using touch panels. The specimens are installed in a room separated by a hood from three sides freely accessible.

Special emphasis was placed on safe, simple and automated operation during development our facilities possess their own safety-related process control system,a sophisticated ventilation concept,and fully automated water discharge system.Thus we achieve highest safety standards.Our testing systems are rounded off by modular design with numerous options(e.g.electroimpedance spectroscopy)and forward-looking software package that captures,long-term stores visualizes,and exports all measurement data.

Specifications

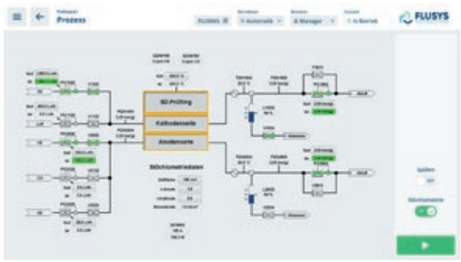
Fuel Cell Test Systems FLU-H_2-Tester FCs

DUT	Single Cell	Stack
Dimensions	1.1 x 1,3 x 2,05 m (width x depth x height) **	1,5 x 2,5 x 2,05 m (width x depth x height)
DUT Positioning	Under extracted bonnet Flexible holder with tray **	Positioning under the extracted bonnet on a transport trolley, which is pushed into the housing
Electronic Load	2 kW, max. 450 A, 0 to 5 V	15 kW, max. 210 A, 0 to 200 V, with energy recovery *
H_2-Flow Range	0.3 to 260 Ln/h *	400 to 12000 Ln/h *
H_2-Circulation	-	900 to 5.400 Ln/h *
O_2/Air-Flow Range	1.5 to 1250 Ln/h *	1400 to 42000 Ln/h *
Pressure Control Range	0 - 4 bar (g) *	optional
Tempering of the DUT	optional	Ultra-pure water circuit (plastic), 10 to 85 °C
Cathode Gas Humidification	optional	Gas-to-gas humidifier, other variants optionall

* Other values on request

** Listed: Basic HT-PEM specifications for electrolysis - and higher power test benches are customised

Stack Test System with ergonomic stack loading



System visualisation on touch panel

Single Cell Test System

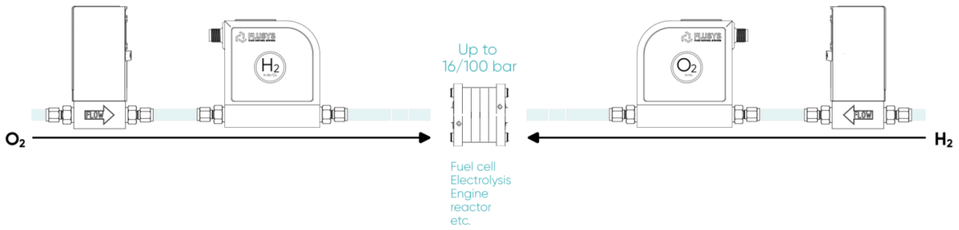
Products · Hydrogen Test Systems – Single Cells & Stacks

H2SafeSens. What is behind?

Explosion protection through permanent gas monitoring in hydrogen applications is one of the essential challenges in operating hydrogen research or production facilities. Due to potential dangers of "thin" H2, operators and designers of test and production systems must take protective measures to prevent damage from an explosion or flashback. The primary goal is to never exceed the 4 % LEL (lower explosive limit) threshold or trigger a pre-alarm to initiate possible safety mechanisms before a hazardous situation arises.

The instruments of the H2SafeSens series differentiate between ambient monitoring under atmospheric conditions (AMBIENT sensor) and direct monitoring in the gas-carrying process line under pressure (PROCESS). The AMBIENT sensor is primarily installed accessible in a part of the plant and can be screwed into existing atmospheric systems, such as exhausts.

The PvSS version can be directly installed into a pressurized pipeline. An integrated pressure sensor ensures safe, pressure-independent concentration measurement with correction.



Specifications

Gases	Typical H_2 O_2, Air Others on request
Flow Range	0 bis 10 % H_2 in Air 10 bis 90 % O_2 in H_2 (others like ppm or ppt on request)
Pressure Range	AMBIENT: 1013 mbar ± 10 % PROCESS: Standard 0 to 16 bar Design HP: 0 to 100 bar (available Q4 2024) Others on request
Material	Fluid: Stainless steel and inert aluminium oxide Housing: Aluminium and stainless steel
Ambient Temperature	-10 to + 50 °C
Power Supply	24 Vdc/ 0.8 A
Accuracy	Better 1.5 % v.E. Individual calibration possible
Response Time	< 0.5 Sec
Connectors	PROCESS: ¼" G Internal thread AMBIENT: ¼" G External thread
Dimensions in mm	PROCESS: 96 x 85 x 45 (height x width x depth) AMBIENT: 124 x 28 (length x width)
Approvals	CE conformity in accordance to Maschinenrichtlinie 2006/42/EG ATEX in preparation

Product Details

- Monitoring of H_2 concentrations
- H_2 in O_2-Air or O_2 in H_2
- PROCESS sensor for inline measurements up to 100 bar
- Measurement signal independent of pressure and temperature
- AMBIENT sensor for ambient monitoring
- Measurement 0 to 10 % LEL
- 2 switching outputs and 1 analog output
- Redundant, self-monitoring sensorsn
- Easy integration into automation
- 4 to 20 mA and IO-Link
- Sensor cell without wear and consumption

Applications

- All H_2 applications and environment
- Detection of H_2 caused by cracks in cells, membranes, leaky fittings, etc.
- Research systems in fuel cell, electrolysis, hydrogen production
- Production and EOL test benches
- H_2 transport and logistics
- H_2 monitoring in vehicles › H_2 generation
- H_2 monitoring in laboratory fume hoods

Advantages

- Conversion-free H_2-measurement
- Independent Measurement principles
- Measurement within the process line
- Robust sensor materials
- Alarm values 24 V, 4 to 20 mA, IO-Link
- Calibration possible
- Protection class IP65
- Suitable for condensationt
- Customizations possible

Products · **H2SafeSens – Gas Monitoring**

Our smart pump family for pilot plants, laboratories, test benches & production

Gear Pump – XPump®

The XPump® is a precise, robust, hermetically sealed gear metering pump solution that can be used in the laboratory, pilot plant and production. Special emphasis was placed on the use of high-quality materials in combination with tight manufacturing tolerances during development. The result: pressure stability and durability, even at high pressures, which no competitor needs to shy away from. The revo-lutionary drive unit is a highly intelligent "plug & work" solution that leaves nothing to be desired. For example, an intuitive input of speed or flow rate is possible via the smart control element with integrated 1.3" TFT display with LED status indicator. The drive unit can be controlled via a variety of interfaces such as 4 to 20 mA, IO-Link, RS485/232 or USB-C.

For rugged industrial - including high-temperature - applications, both three-phase motors with or without frequency converter (FU) and complete ATEX-compliant solutions according to Zone I and II are available.

Specifications Drive

Material	Housing Anodized aluminum with brushed stainless steel cover
Power Supply	24 V DC ± 10 %
Power Consumption (nominal mode)	< 82 W
Nominal Power	68 W
Torque (nominal operation)	170 mNm
Interfaces depending on model:	Analog (4 to 20 mA) IO-Link Bronkhorst-Connection RS232/RS485 (Modbus - RTU) USB-C (service interface)
Speed Range (RPM)	300 to 5000 min-1 (scalable by the user)
Protection Class	IP40, optional IP65

Pump Head Specifications – Series: XP0, XP1, XP2

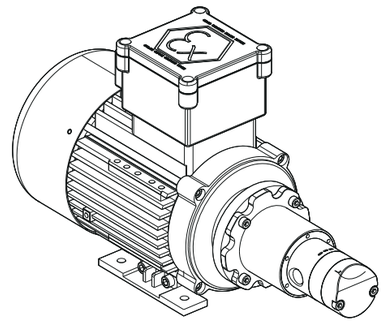
Conveying Media	Lubricating and non-lubricating liquids
Viscosities	0.3 to 2500 mPa.s (others on request)
Flow Rate	0.01 to 240 ml/min (XPH0) 0.02 to 4500 ml/min (XPH1)
Temperatures	Fluid: 0 °C to 50 °C (up to 300 °C on request)
Ex-Classes	ATEX-Zone I & II II 2G Ex h IIB T2..T6 Gb, II 2D Ex h IIIC T135 °C Db
Material	Stainless steel (special alloy) Stainless steel 1.4571 (standard) PEEK/Hastelloy C276 (on request) PEEK/Titanium (on request) PTFE/Hastelloy C276 (on request) PTFE/Titanium (on request)
Seals	Standard: PTFE, Alternative: FKM, FFKM (up to 330 °C)

Technical Data Pump Heads

Type	max. Flow Rate*	Pressure	RPM
XP0-Version	60 ml/min	5 bar	5000 min-1
	120 ml/min	5 bar	5000 min-1
	240 ml/min	5 bar	5000 min-1
XP1-Version	200 ml/min	15 bar	5000 min-1
	450 ml/min	30 bar	5000 min-1
	900 ml/min	30 bar	5000 min-1
	1600 ml/min	30 bar	5000 min-1
	3000 ml/min	30 bar	5000 min-1
	4500 ml/min	30 bar	5000 min-1

* Reference to water and atm at 20 °C

Pump head and gearwheel variants



Industrial drive

Products · **XPump – Gear Pump**

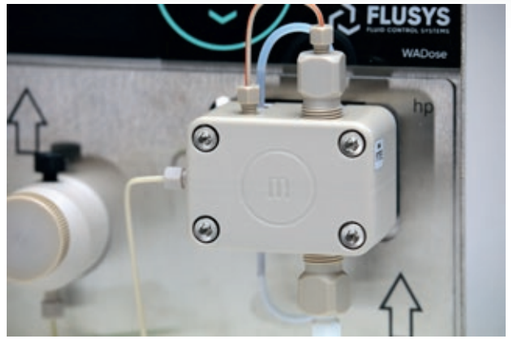
Our smart pump family for pilot plants, laboratories, test benches & production

WADose: Two-Piston High-Pressure Pump - Precise, intuitive versatile

Experience highest precision and ease of use with our two-piston high-pressure pumps. A 2.4" LC display ensures intuitive control. Alternatively our WADose-Lite can also be controlled via external analog signals or various bus systems.The integrated 400 bar pressure sensor allows individual pressure shutdown in case of overpressure or underpressure.With the optional mini CORI-FLOW™ mass flow meter from Bronkhorst-High-Tech B.V you monitor and regulate the pumped quantity exactly - choose between unregulated and regulated operation according to your needs.Our high-pressure pumps are ideal for precise dosing and work in pilot plants,laboratories,and production.

Technical specifications

	WADose LITE HP (High pressure)	WADose LITE HF (High flow)
Temperatures	Standard [S] up to 40 °C	Standard [S] up to 40 °C
	Offset pump head [TU] up to 120 °C	Offset pump head [TU] in planning stage
	High temp. [HT] up to 200 °C	
Material	Stainless Steel [SS] (also PEEK, Ruby, Sapphire, PTFE, Kalrez®, Ceramic)	Stainless Steel [SS] (also PEEK, Ruby, Sapphire, PTFE, Kalrez®, Ceramic)
	PEEK [PE] (also Ruby, Sapphire, PTFE, Kalrez® Ceramic)	PEEK [PE] (also Ruby, Sapphire, PTFE, Kalrez® Ceramic)
	Hastelloy [HC] (also Kel-f®, Ruby, Sapphire, PTFE, FFKM, Ceramic)	
Flow and Pressure Range	Pump head [m] 0.001 to 2 ml/min up to 400 bar	Pump head [150] 0.1 to 150 ml/min, up to 350 bar
	Pump head [a] 0.005 to 10 ml/min up to 400 bar	Pump head [250] 0.2 to 250 ml/min, up to 200 bar
	Pump head [p] 0.02 to 40 ml/min (PEEK 30ml/min) up to 160 bar	Pump head [500] 0.5 to 500 ml/min up to 80 bar
Interfaces	Analogue signal 4-20 mA (0-10 V)	Analogue signal 4-20 mA (0-10 V)
	Dig. Start/Stop, Alarm, Reset	Dig. Start/Stop, Alarm, Reset
	RS232	RS232
	USB	USB
	RS485 (Modbus RTU)	RS485 (Modbus RTU)
	BHT-Sensor	BHT-Sensor



WADose LITE HP made of PEEK

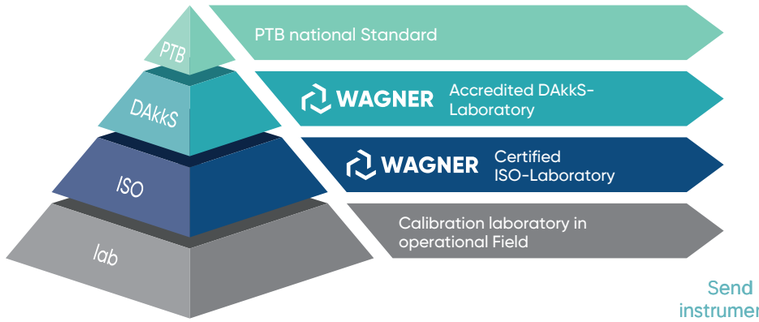
Products · **WADose – Two-Piston High-Pressure Pump**

Service & Calibration

At the center of precisionand repeatability: Our serviceand calibration lab team specializesin identifying fine detailsand deviationsand ensuring themeasurement accuracyof customer devices/instruments.For over three decades we have been proudto operateour own ISO factorycalibrationlab equippedwith adjustment capabilities. In 2014 we were awarded the DAkkS accreditation according to DIN EN ISO/IEC17025 by the German Accreditation DAkkS. Equipped with state-of-the-art calibration equipment, we provide a wide rangeof top-notch support:

- Calibration and adjustment
- DAkkS-Calibration ISO 17025
- Process gas calibration: H_2, CH_4, CO_2, Ar, He, N_2, ...
- On-site calibration

	DAkkS-Accredited ISO/IEC 17025	Certified ISO 9001
Return to the national standard	Directly to PTB	Indirectly to PTB/NMI
Externe Überwachung	National Accreditation Centre	Private Certification Centre
External monitoring	ISO/IEC 17025 DAkkS-Accreditation	ISO 9001-Certification
Measured type	Flow and stream	Flow, stream and pressure
Calibration medium	Air and process gases: N_2, H_2, Ar, He, CH_4, CO_2	Air, water and process gases: N_2, H_2, Ar, He, CH_4, CO_2, other on request
Ranges	10 mnl/min to 2.500 ln/min (150 m^3n/h)	0,02 mln/min to 11.000 m^3 n/h
Stream	0,1 m/s to 40 m/s	0,1 m/s to 40 m/s
Calibration items	Manufacturer independent	Manufacturer independent Authorised Global Service Office for Bronkhorst High-Tech products
Relevance	Accredited testing and calibration laboratories Utility and factory standards High accuracy and precision Industries: Medical, pharmaceutical, food, automotive and aerospace	Simple measuring equipment Relative accuracy and precision Non-critical processes On-site calibration



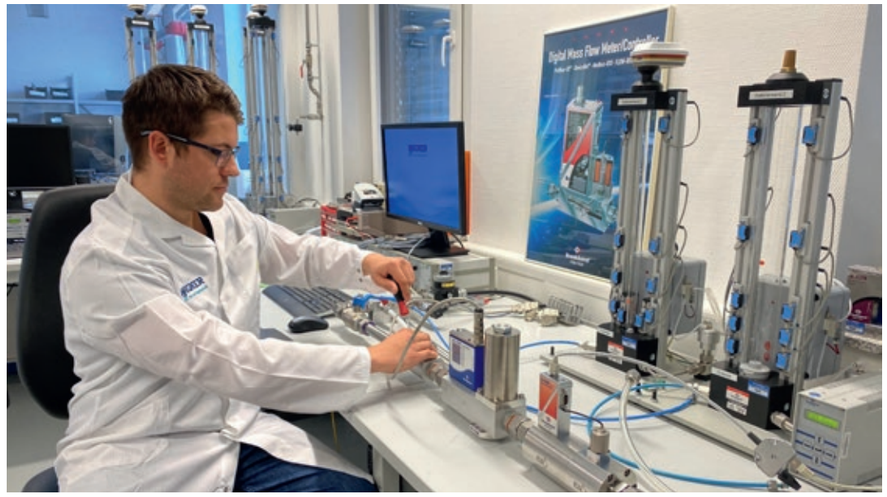
Send in instrument

Regular service for the best product quality

Calibration, i.e. the comparison of two measuring devices including documentation of this comparison, and regular maintenance of a process device is crucial to ensure that it performs accurate measurements. Regular checking of devices is an important factor in detecting possible deviations and in making necessary corrections for accuracy.

To determine product quality, it is crucial to perform process-accompanying measurements and check whether they fall with in the defined tolerance. Depending on the application are a of the measuring instruments, such as pharmacy, shorter service and calibration intervals may be prescribed.

With decades of expertise from our team, state-of-the-art calibration and service-labs, and accredited process procedures, we support you in securing your product quality and standards.



Deutsche Akkreditierungsstelle D-K-19576-01-00

Kompetenz ZENTRUM für Massendurchfluss

Service and Calibration

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FLUSYS
FLUID CONTROL SYSTEMS
Heinrich-Krumm-Straße 8 · 63073 Offenbach · Germany · info@flusys.de · +49 69 450916-500