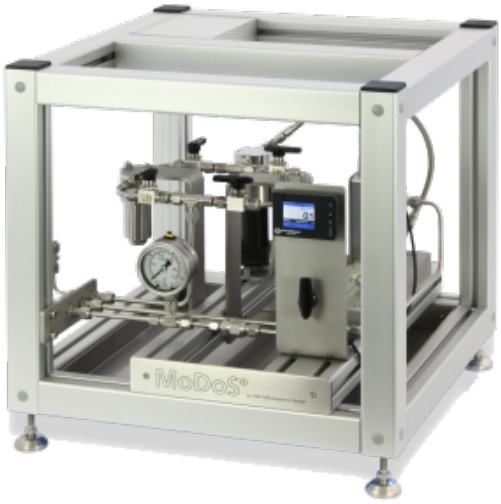
Product information

Modular Dosing System · MoDoS



Description

The Modular Dosing System MoDoS® is a tailor-made pump system for continuous production process in fine chemical and pharmaceutical production.

MoDoS is synonym for a design concept and a component kit, forming the base for the development of a customized pump module. We provide detailed advice on the selection and integration of components.

You will receive a tested and ready-to-use dosing system in a stable frame. The selection of sensors for flow, pressure or temperature is carried out on the process parameters. We use flow sensors from different manufacturers, based on various thermal principles or on the Coriolis principle.

MoDoS is a complete solution for process-safe pumping in the low-volume range, suitable for vaccines, APIs, acids, alkalis, catalysts, ammonia and much more.

Advantages

- Ready-to-use unit fully equipped and assembled system in a rigid framework
- Modular system of components individually equipped with micro annular gear pump, filters, sensors (e.g. flow, pressure, temperature) valves, fluid connections
- Chemical resistant materials material combinations from stainless steel / hard metal to alloy C22 / ceramics, optional titanium
- High process stability mass or volume flow controlled micro annular gear pumps
- Standard fluidic interfaces screw-in fittings or aseptic µ-Clamp
- Local controller integrated controller allows stand-alone mode as well as inte-gration into external process control systems
- Open design easy access and exchange of all components

Applications

- Micro process technology
- Flow chemistry
- Fine chemistry
- Pharmaceutical production
- Miniplant technology
- Dosing and filling

Technical data

Pumps	Micro annular gear pumps of hermetic inert and high performance series for volume flows from 0.003 to 1152 ml/min at differential pressures up to 80 bar *
Filter	Filters in stainless steel, alloy C22, PTFE or glass *
Mass flow controllers	Measurement principal Coriolis, thermic, ultra sonic *
Fluid connection	1/4"–28 UNF, 1/8" NPT, 3/8" NPT *
Liquid temperature range	-20 … +150 °C (-4 ... 302 °F) *
Viscosity range	0.3 … 1,000 * mPas
Wetted parts	Material combinations: stainless steel / hard metal, alloy C22 / ceramics, optional titanium *
Power supply	24 V DC, 240 V AC, 400 V AC *
Display	Mass flow *
Controller and interfaces	Mass flow control with touch display, potentiometer, 0–10 V, 0(4)-20 mA, RS-232, CAN-Bus *
Remarks	* depending on the components selected

Notice
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual performance may vary. Specifications are subject to change without notice. This document is subject to change without notice.

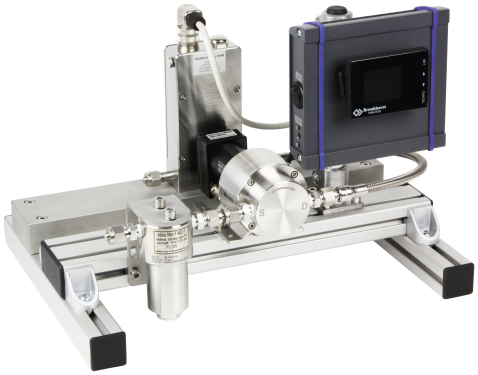
Typical Liquids

- Acids and bases
- Organometallic compounds, butyl lithium
- Catalysts
- Ammonia, pure or in solution
- Pharmaceutical ingredients and vaccines
- Solutions of radioactive isotopes
- Organic reagents

Components

- Micro annular gear pump
- Sensors for ?ow, pressure, temperature
- Display Control
- Filter
- Valves, shut-off elements
- Screw-in ?ttings, adapters
- Hoses, pipes
- Frames

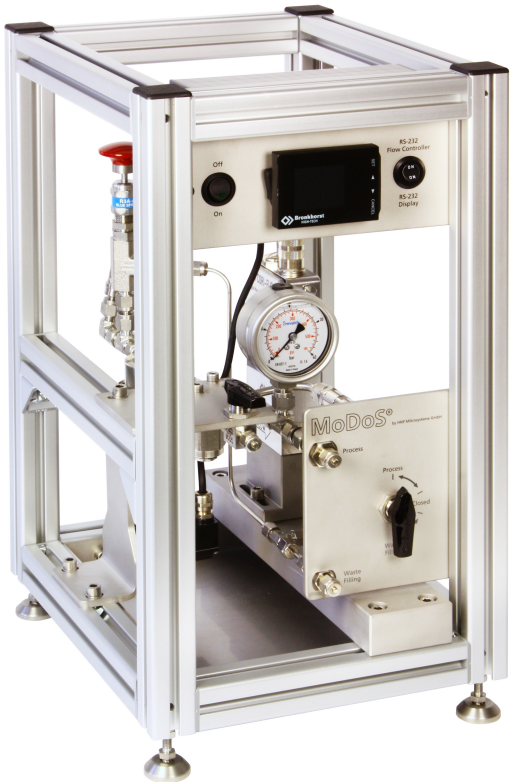
Versions and examples



MoDoS Lab

MoDoS Pilot

MoDoS Pro



MoDoS Slim

Patents and trademarks

Micro annular gear pumps (and housings) are protected by assigned patents: EP 1 354 135 B1; US 7,698,818 B2; DE 10 2011 001 041 B4; CN 103 348 141 B; US 10,012,220 B2; CN 103 732 921 B; US 9,404,492 B2; US 6,520,757 B1.
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