JONSN
PUMPS & TECHNOLOGY



MPG

PRECISION MICRO GEAR PUMP

Attentively focusing on each high precision micro gear pumps is our initial aspiration

■ **SHANGHAI JONSN FLUID EQUIPMENT CO., LTD.**

Address: Building 4, No. 276 West Xinhua Road, Zhangyan Town, Jinshan District, Shanghai

Tel: 021-34720020 Fax: 021-67689517
Website: www.jonsn.cn Email: lijun@jonsn.cn

■ **JONSN (GANZHOU) FLUID TECHNOLOGY CO., LTD.**

Address: Building A3, Qiuyue Science and Technology Park, Economic and Technological Development Zone, Ganzhou City, Jiangxi Province, P.R.China

Website: www.jonsn.com
Email: sales@jonsn.com (International department)

Professional chemical gear pump manufacturer

ENTERPRISE PROFILE

Shanghai JONSN Fluid Equipment Co.,Ltd. was established in 2010. It is a company with world-renowned imported pumps as its technical background. It has two business divisions,namely the JONSN brand pump manufacturing division and the imported pump trading division. An excellent R&D and innovation team provides customers with fluid transportation solutions that integrate design, production and sales.

In 2019, Shanghai JONSN Fluid Equipment Co., Ltd. made a new plan to establish a new factory in the central region. In 2020, the new factory was officially settled in Ganzhou National Economic and Technological Development Zone. JONSN bucked the trend and formed a new technology development team, cooperated with foreign companies, adopted foreign advanced manufacturing technology and lean management, selected high-quality raw materials, designed and manufactured precision gear metering pumps with high cost performance, easy installation and maintenance.



DEVELOPMENT PATH



2010

Shanghai JONSN Fluid Equipment Co., Ltd. was founded. The company's core management team boasts years of working experience in foreign-funded pump enterprises. We act as an agent for imported pumps from Europe and America.

2011

The full range of JONSN drum pumps completed design development and passed performance testing.Obtained drum pump patent certificates and CE certification.

2012-2013

Strategically upgraded to a manufacturing enterprise. The product design of JONSN precision micro gear pumps has been completed, and prototypes have passed verification.

2014

Mass offline production of JONSN precision micro gear pumps was launched successively.The design and planning of the DX series high-viscosity gear pumps have been initiated.

2015

JONSN trademark registered; 2 invention patents and 7 utility model patents applied.JONSN precision micro gear pumps finalized for mass production, applied and exported to Europe and America.Successfully signed with Sinopec, CNOOC, Tianjin Jereh, etc.

2016-2017

DX series high-viscosity gear pumps finalized for production. Same year, company's gear pump annual output value over 30 million yuan. Introduced product coding traceability & 6S on-site management systems.

2018-2019

Enterprise strategic positioning upgraded to "Trustworthy High-Quality Pump Supplier".Focus on quality control; 100% factory test qualified.JONSN precision gear pumps successfully obtained CE certification.Applied to marine SCR exhaust gas treatment systems.

2020-2021

Initiated new LOGO brand identity and brand philosophy.Focus on R&D and production of high-precision gear pumps.Company launched R&D of DP series high-viscosity gear metering pumps.Initiated TÜV Rheinland ISO9001 quality management system certification.

2022-2023

Obtained certifications from multiple classification societies.
Products comply with ABS, BV, DNV and other certifications.

2024-2025

2024: Awarded High-Tech Enterprise and Specialized, Refined, Unique & Innovative Enterprise;
2025: Officially settled in Ganzhou Qiuyue Science and Technology Park; smart factory launched.JONSN established gear pump R&D center in Ganzhou.

2026 至今

Successfully renewed TÜV Rheinland ISO 9001:2015 quality management system certificationIncreased investment in R&D
JONSN successfully signed a contract with AMEC (Advanced Micro-Fabrication Equipment Inc.)

HIGH-END CNC MACHINING AND PRECISION INSPECTION EQUIPMENT



Mazak Machining Center



Double - Plane Lapping Machine

We have introduced world-class CNC machining and precision inspection equipment to establish a comprehensive, high-precision manufacturing system—spanning the entire process from component machining to finished product inspection. Centered around leading international brands such as Mazak and Zeiss, we guarantee micron-level precision for every single component of our precision gear pumps, utilizing state-of-the-art machinery to forge a rock-solid foundation for product quality.



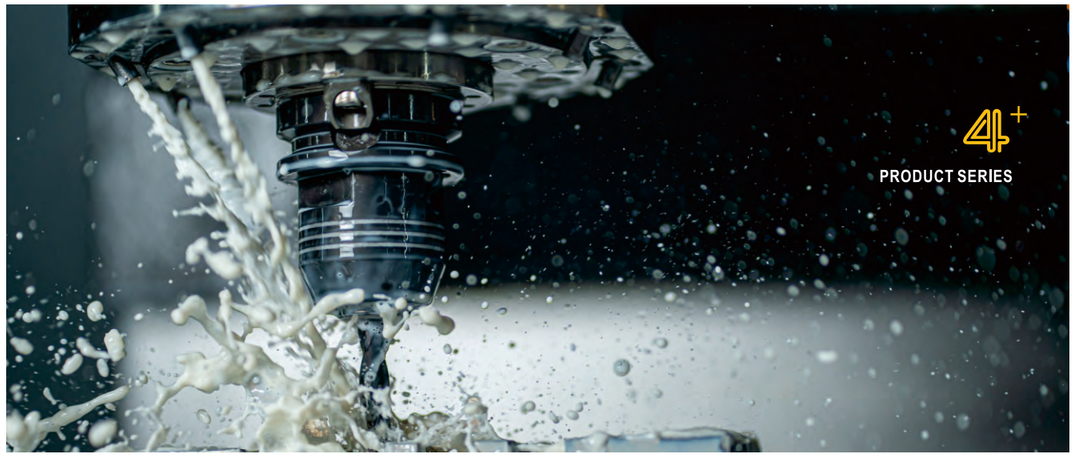
Zeiss Coordinate Measuring Machine (CMM)



Precision High-Speed Jig Milling and Grinding Center

MACHINE TOOL

COOPERATIVE PARTNER



MR Series
precision magnetic gear pump

DP Series
DP series medium and high viscosity precision gear metering pump

DX Series
DX series high temperature and high viscosity gear metering pump

Acting
Acting as an agent for BRONTZ internal gear pumps

CATL 宁德时代 · CETC中国电科 · 中国航空工业集团有限公司 AVIATION INDUSTRY CORPORATION OF CHINA, LTD. · 中国科学技术大学 University of Science and Technology of China

CSIC 中船重工 · HTGD 亨通光电 HENGTONG OPTIC-ELECTRIC · 華中科技大学 · GE

BAYER · Sinopec · DUPONT · Clariant

BASF The Chemical Company · Tofflon · SINOCHEM 中化

期待与您的合作
Look forward to working with you

HONORARY PATENT

We focus on the technical development of precision gear pumps. We are engaged in precision production. Skilled technology and craftsmanship are the main characteristics of our work. The birth of every Jonsn precision gear pump embodies the beauty of craftsmen. Their strict requirements for products and outstanding performance have contributed to the development of the company.

Jonsn company has successively obtained 15 utility model patents, 2 invention patents, meanwhile we have obtained the German TÜV Rheinland ISO9001 quality management system certification, CE certification, ABS certification, BV certification, Nippon Kaiji Kyokai certification, etc.



TÜV Rheinland ISO9001 quality management certification



BV certification



ABS certification



2 invention patents
15 utility model patents



RoHS Test Report



CE certification

MPG SERIES PRECISION MINIATURE MAGNETIC GEAR PUMP

Micro-flow | Pulsation-free | Ultra-long lifespan | Batch consistency | Deep customization

Solve an industry pain point in a single sentence.

It delivers truly high-precision, pulse-free, linearly stable delivery at microliter flow rates, with full-dimensional non-standard customization available.

±0.2%
Repeatability

>20000h
Flow rate degradation: <2% (10,000 h)

±0.5%
Linearity accuracy

3~5x
Exceeds industry lifespan

Six Core Advantages

01 NO.

Ultra-high precision, consistent batch-to-batch quality.

Positive displacement principle combined with servo/stepper motor drive delivers a truly pulsation-free linear flow.

Linearity: **±0.5%** Repeatability: **±0.2%** Unit-to-unit consistency: **±2–5%** Flow rate degradation: **<2%/10000h**

02 NO.

High suction capability and pressure resistance; suitable for extreme operating conditions.

Easily handles low liquid levels, high viscosity, or long suction lines, and supports high-pressure transfer applications.

Inlet vacuum level: **-95 kPa** Standard pressure rating: **4 MPa** High-pressure models: **6–10 Mpa**

03 NO.

Zero leakage, safe and clean.

Features a full magnetic drive and static O-ring seal design, ensuring the medium is completely contained. Eliminates the risk of mechanical seal wear and prevents leakage, contamination, and cross-infection.

Sealing Method: **Full magnetic drive** Certification Standards: **FDA Certified, RoHS Certified, Heavy Metal Free**

04 NO.

Specialized materials, exquisite craftsmanship.

The gear shaft utilizes high-strength modified PEEK, heat treatment, and zirconia ceramic.

Sliding bushing: **PEEK-ceramic composite formulation**, integrally molded.
Wear resistance: **Over 5 times** better than standard bushings. Friction coefficient: **Extremely low.**

05 NO.

Ultra-long lifespan—one unit does the work of three.

Material and structural dual optimization delivers tens of thousands of hours of trouble-free continuous operation, cutting downtime, part replacement and labor costs to boost line stability and investment return.

Actual service life: **3–5 times** that of standard pumps Maintenance-free operation: **Tens of thousands of hours**

06 NO.

Deep, highly customized solutions seamlessly integrated into your system.

We understand every piece of equipment is unique.The MR series supports fully customized development. From standard models to exclusive solutions, we work with you to redefine the limits of precision fluid transfer.

Custom Ports
VCR, quick disconnect, sanitary tri-clamp and other specifications available

Port Orientation
0°/90°/180° multi-direction layout, fits compact installation spaces

Surface Coating
Custom electrolytic & PVD wear-resistant coatings

Integrated Motor
Supports servo/stepper closed-loop flow control systems

Mounting Options
Flexible installation with flanges, brackets and embedded bases

Other Customization
Flow feedback, temperature sensing, Modbus / CANopen

Typical application scenarios



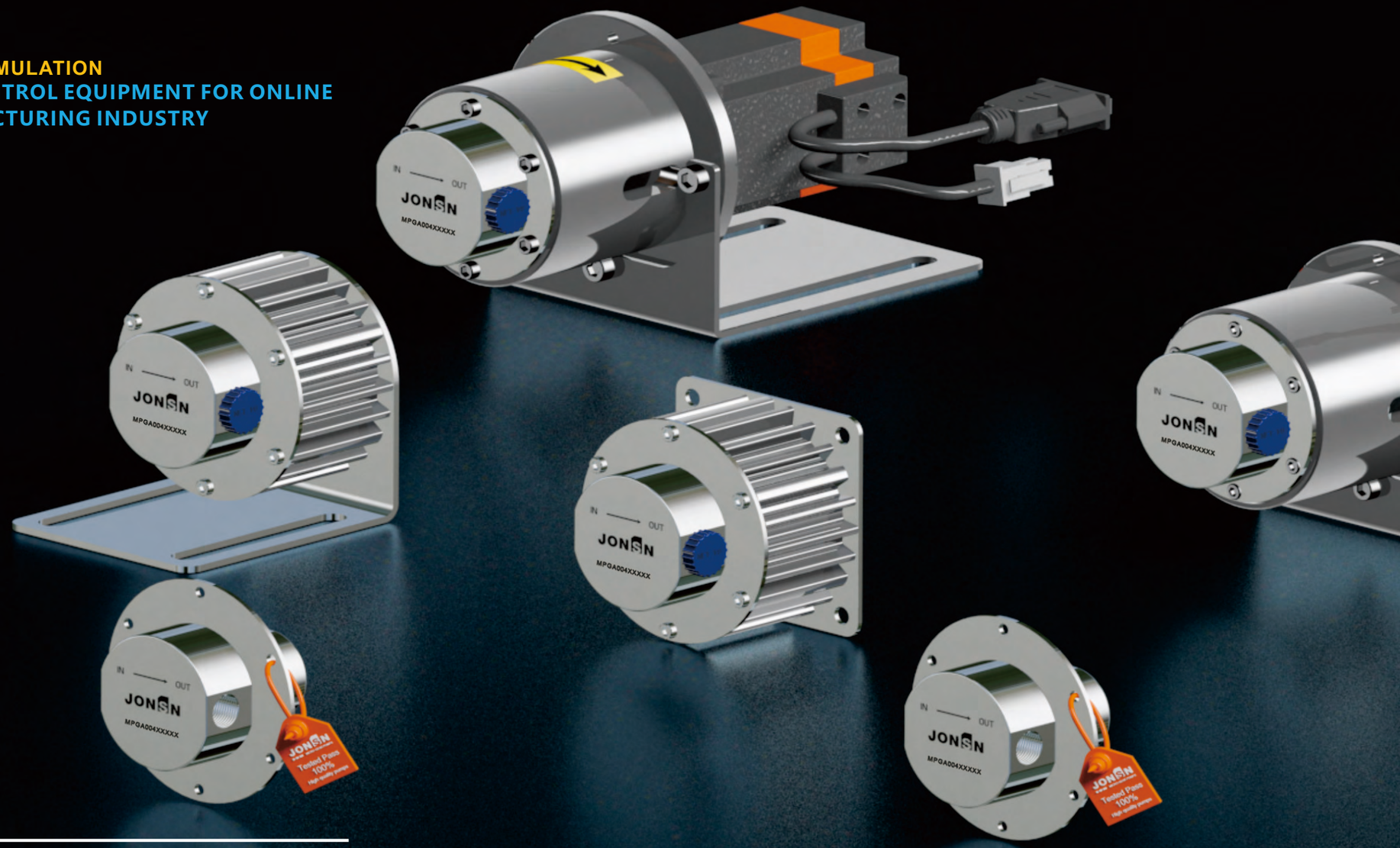






AFTER A DOZEN YEARS OF TECHNICAL ACCUMULATION

JONSN GEA RPUMP HAS BECOME A KEY CONTROL EQUIPMENT FOR ONLINE TRANSMIISION IN THE HIGH-END MANUFACTURING INDUSTRY



Performance parameter

Flow range	1-320ml/min
Inlet pressure	-95kPa
Differential pressure	0~25bar Depends on material viscosity
Pressure resistance	for PTFE O-ring is 3 Mpa, for Viton O-ring is 4 Mpa
Temperature	Standard -20°C to 80°C, low temperature to -40°C, high temperature to 160°C can be customized
Viscosity range	0.4-3000cps
Maximum density	1.8
Motor can be equipped	AC motor, BLDC motor, servo motor, variable frequency ex-proof motor
Import and export thread	NPT1/8、G1/8
Non-standard customization	OEM mechanical equipment matching servo system customization

Theoretical flow

Pump		Motor speed (rpm)				
Order No	Size	100	750	1450	2850	4000
MPGA004	1/8	4	30	58	114	160
MPGA008		8	60	116	228	320

Theoretical flow(ml/min)

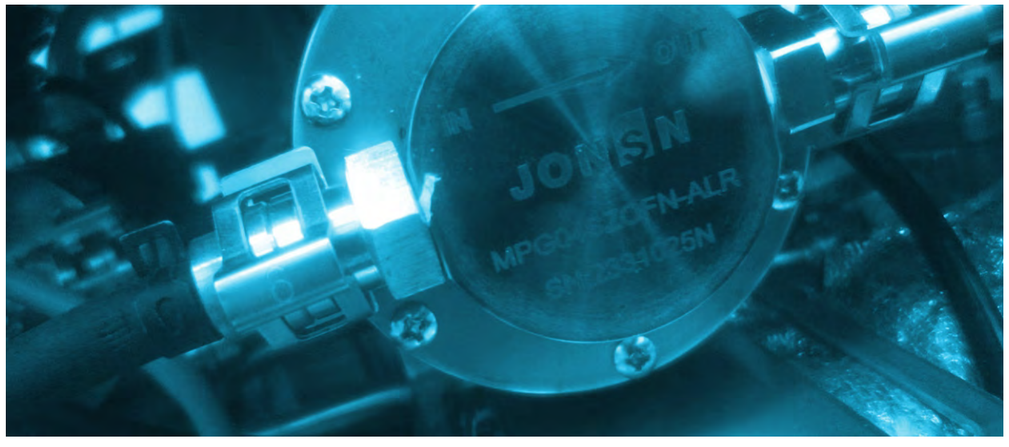




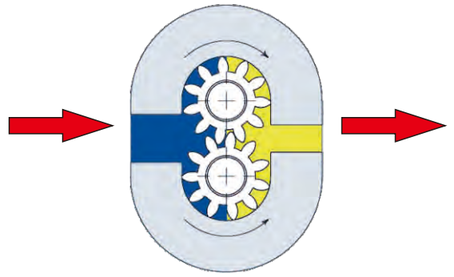
■ Note: The above flow data is tested with water as the medium and no pressure at the pump outlet. Due to the gap loss of the gear rotation, the actual flow will vary according to the medium viscosity, pressure and motor speed. The test datas tell us: When medium viscosity and pressure difference keep unchange, as long as the motor speed is stable, the flow is stable. The flow rate depends on the motor output speed and outlet pressure.

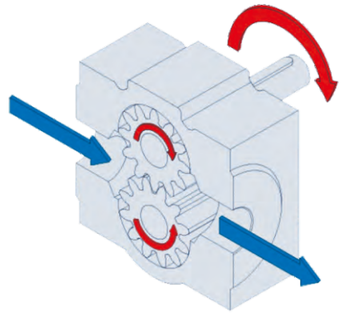
So it is vital to choose a high effective,stable motor. Users who use precision gear pumps for the first time can download our company's selection data sheet and tell us the relevant parameters.

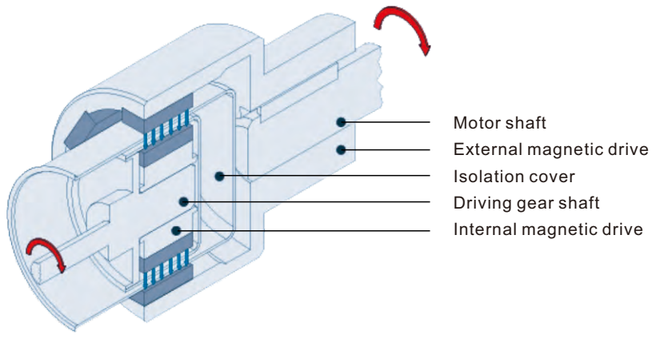
We have professional pump and motor selection software and application experience of tens of thousands of pumps. We will provide a detailed selection report of the pump, we are able to customize a professional system solution for you. For details, please consult the sales staff.

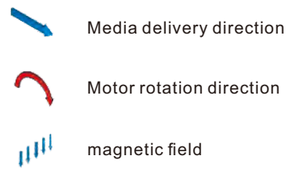


COMPLETELY SOLVE THE MEDIUM LEAKAGE MAGNETIC GEAR PUMPS









CONFIGURATION CODE

MPG	A	004	S	Z	0	L	F	N	N	A	0
Series No.	Inlet & outlet thread A:NPT1/8	Displacement 004 008 cc/r Eg.004=0.04cc/r	Pump material S:316L P:PPS H:HC276 K:PEEK	Gear shaft material Z:Nano-ceramic shaft+PEEK	Sliding bearing 0:No Sliding bearing	Structure (Inlet and outlet direction) L:180° B:90°&other	Static seal F:PTFE E:EPDM M:FKM P:FFKM E:CR	Shaft seal type N:Shielded magnetic drive	Material of Internal magnet N:NdFeb magnet Y:Ferrite magnet	Mounting plate A:Type A B:Type B 0:Standard option	Special treating 0:No special 1:DLC coating 2:Electroplating 3:Welding head 4:electroheating 5:G Thread 9:OEM

MPG

MICRO FLOW TYPE GEAR PUMP

MPG series micro gear pump flow is stable and accurate with small size,
it is widely used in medical, biochemical instruments, fuel cells, kidney dialysis,
inkjet printing, experimental analyzer and many other industries.



MPG

MPG

MICRO GEAR PUMPS

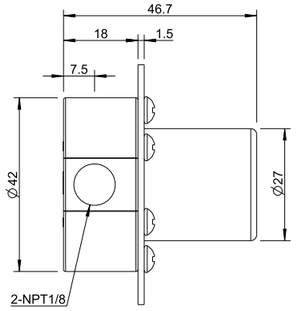
Micro flow type



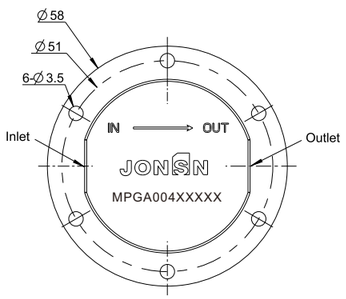
Resolvable working conditions

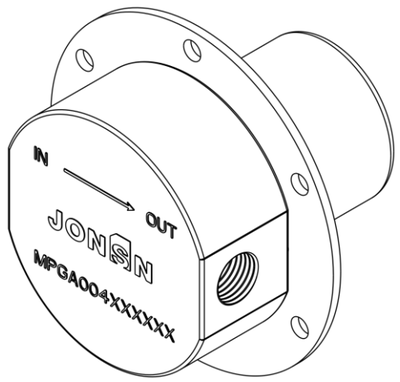
The displacement of MPGA004 is 42 ul/rev (ul per revolution), and it can solve the flow rate of 1-135ml/min. It has the characteristics of a wide range of micro-flow adjustment, and the working pressure difference is 2 bar.

MPGA008 has a displacement of 86 ul/rev per revolution, can solve the flow rate of 22-280ml/min, has the characteristics of a wide range of micro-flow adjustment, and has a working pressure difference of 5 bar.

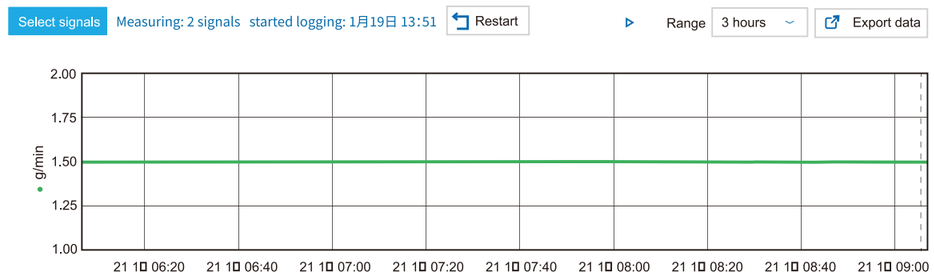


Pumps order NO.	
MPGA004	head uniform dimensions
MPGA008	



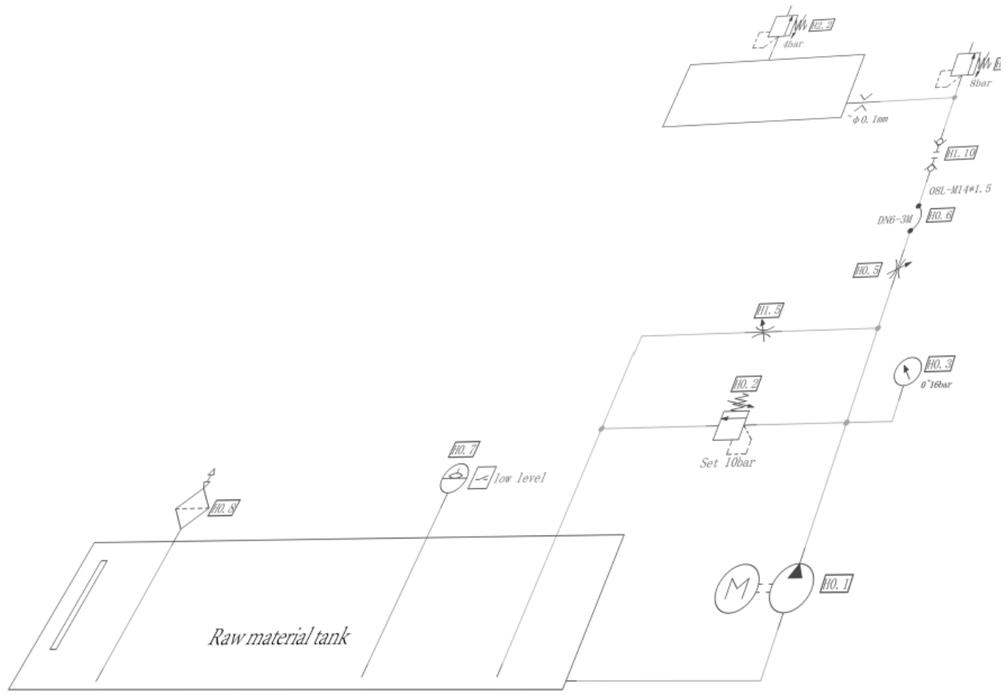


Flow Curve 3-Hour Consistency, MPGAA004 (Medium: Water, 0.16 bar, Rotational Speed: 60 rpm)



Signals | Y-Axes | Y-axes based on: Instrument | Unint

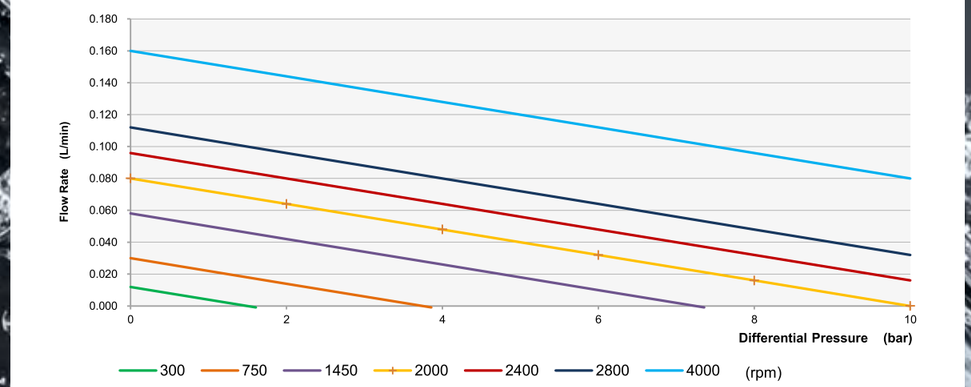
Show	Source	Metric	Color	Capacity of signal	Measured at 09:05:40.2	Unit
●	M13	Flow		0.000-33.333	1.4754128	g/min
○	M13	Temperature		0.000-100.000	17.956717	°C



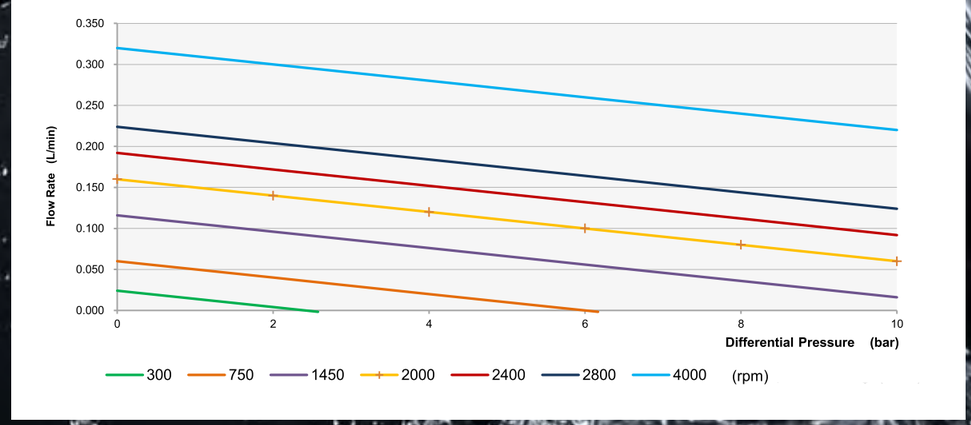
PERFORMANCE CURVE

water

Pump Head MPGA004
Measured with water 1 mPas 40℃

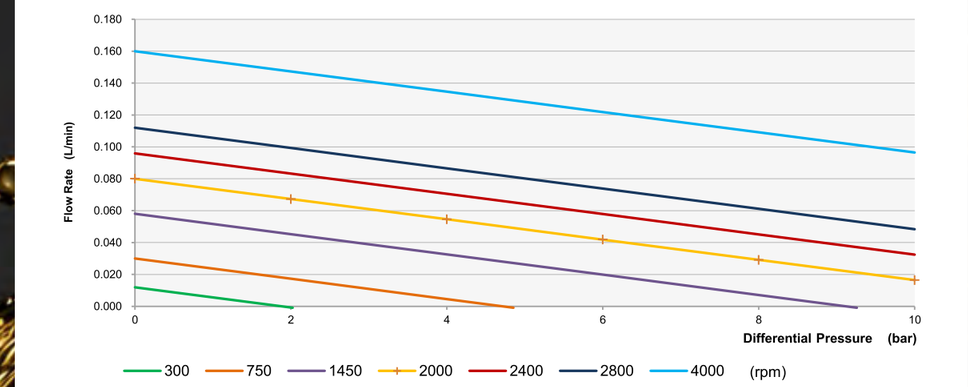


Pump Head MPGA008
Measured with water 1 mPas 40℃

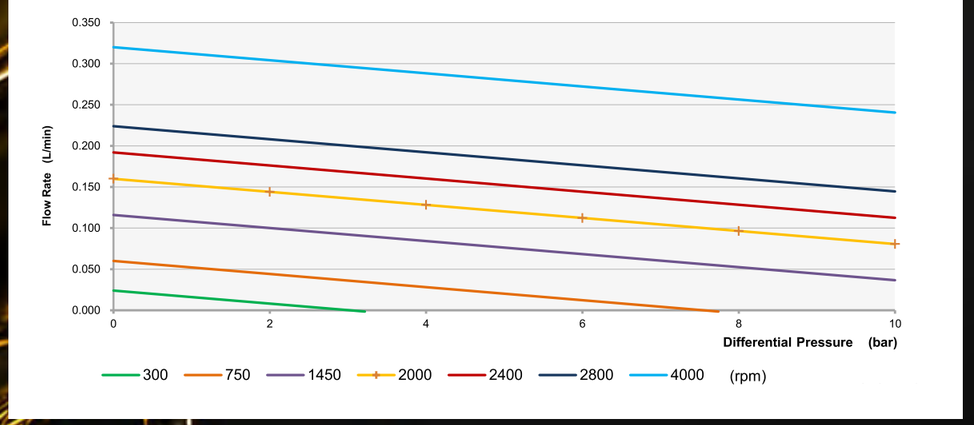


oil

Pump Head MPGA004
Measured with oil 100 mPas

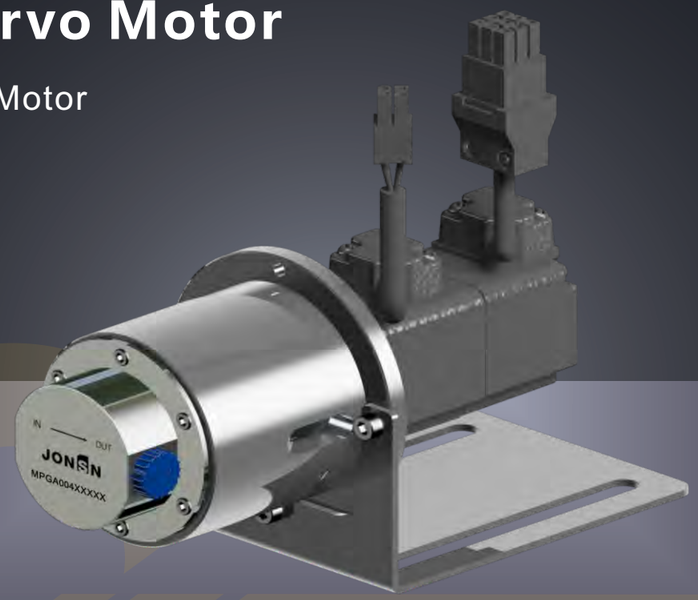


Pump Head MPGA008
Measured with oil 100 mPas

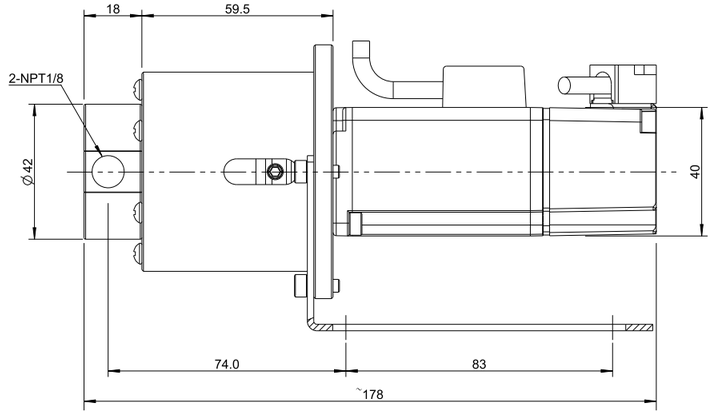


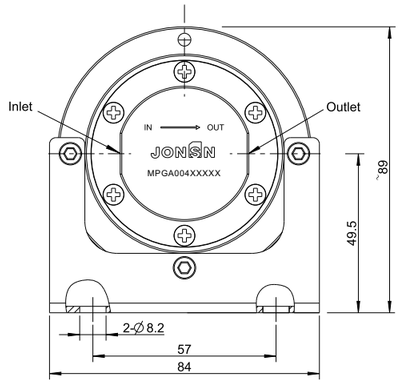
MPG Servo Motor

MPG Servo Motor
220V/110V
40 Frame



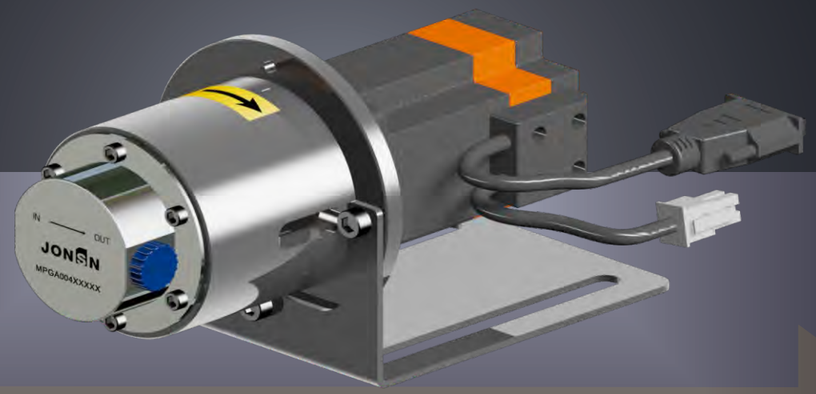
Standard motor: Delta
Other options: Siemens, Panasonic, Mitsubishi, Yaskawa
Other special motor purchased and installed by Jonsn



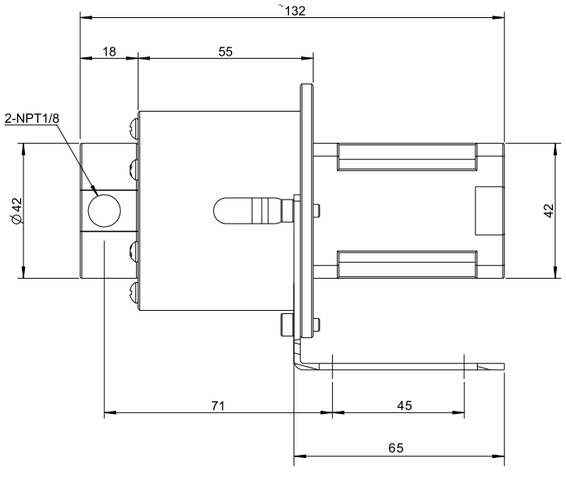


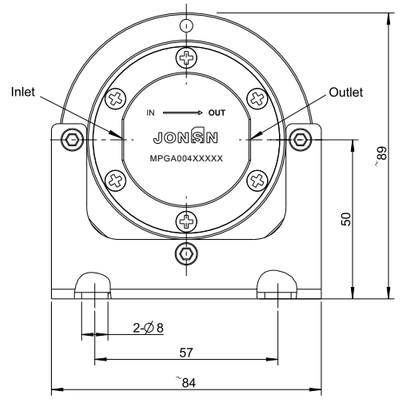
MPG Stepper Motor

MPG Stepper Motor
24V
42 Frame



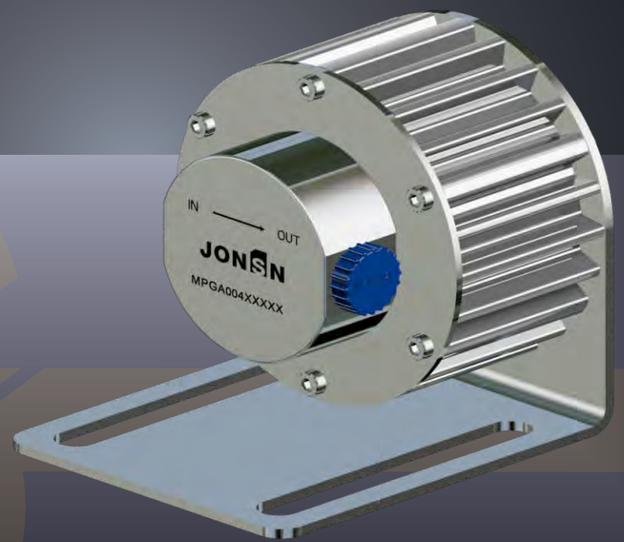
Standard: Jonsn customized
Options: 42, 57, 60, 86 frame

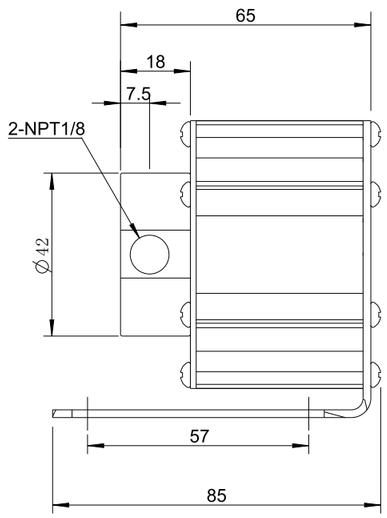


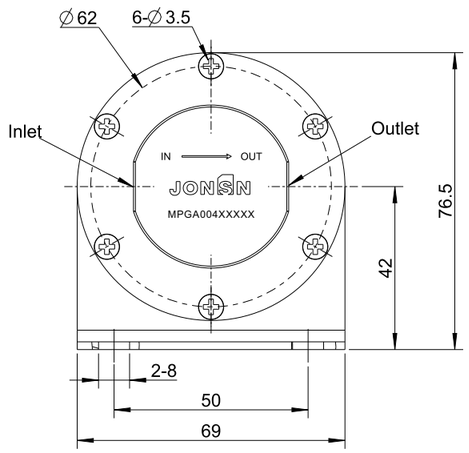


MPG

BASE MOUNTING TYPE
BLDC 24V/40~70W



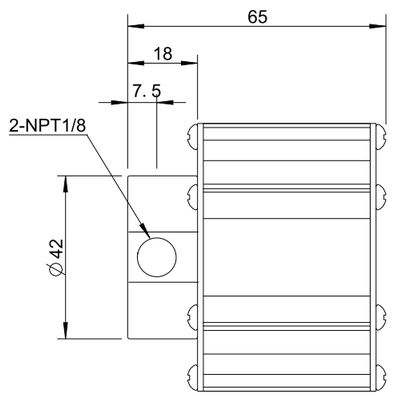


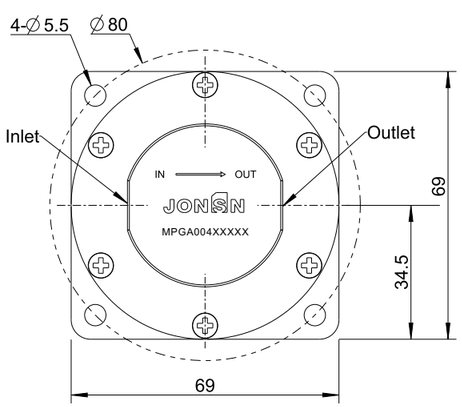


MPG

FLANGE MOUNTING TYPE
BLDC 24V/40~70W

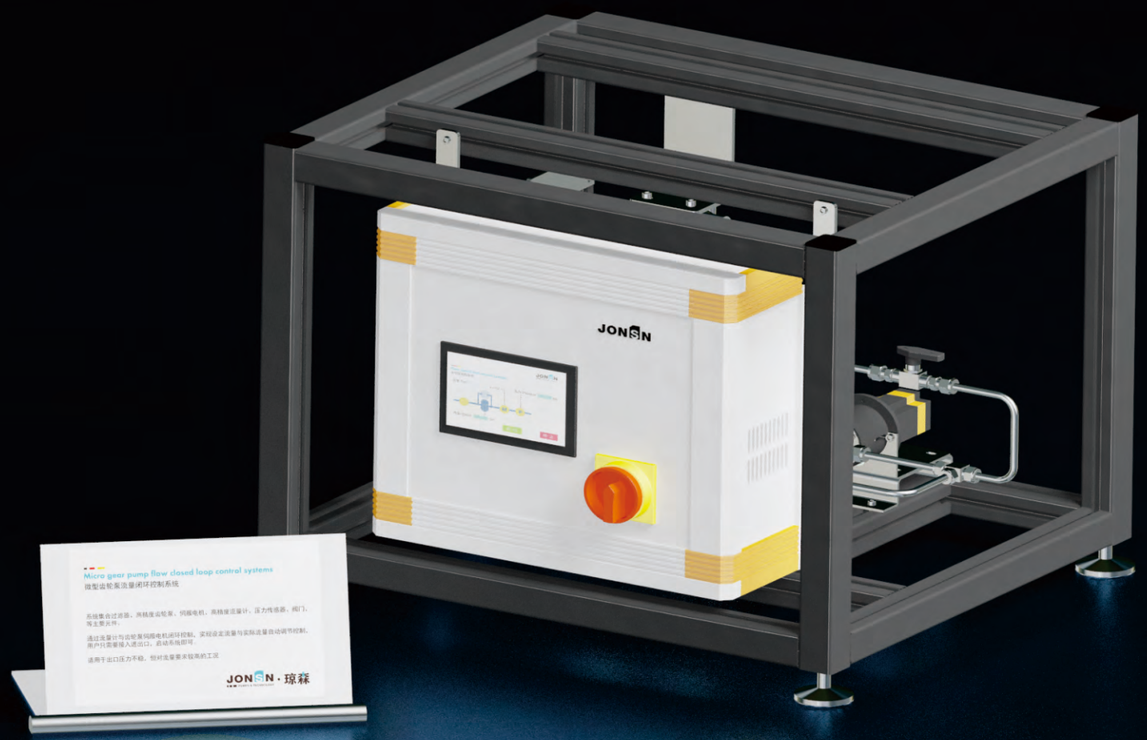






We are deeply involved in the field of online precision transmission of small flow

Serve domestic and abroad key laboratories, scientific institutes, enterprises and institutions, etc.
Precision micro gear pumps are used in semiconductor, nuclear industry, special material preparation, fine chemical industry.



With rich fluid control professional knowledge, we are able to provide professional micro flow solutions.

SELECTION PARAMETERS

Customer code _____ Address _____

company _____ Extension _____

Name _____ Fax _____

Department _____ E-Mail _____

Medium

Name _____ Viscosity _____ cps

Application areas _____ Medium temperature _____ ℃

Concentration _____ % Ambient temperature _____ ℃

Whether explosive ☐ Yes ☐ No Solid content ☐ Yes ☐ No ☐ Soft ☐ Hard

Density _____ Media status ☐ Fluidity ☐ Thixotropy ☐ Sticky ☐ Curing

Operating conditions

flow _____ L/min _____ L/h Outlet pressure _____ bar

_____ kpa _____ M Working frequency ☐ Continuous Intermittent ☐ Intermittent

Inlet pressure Positive pressure or Suction

_____ kpa

Vacuum

Drive motor

☐ Single phase ☐ 24V BLDC motor

☐ Three phase ☐ 24V Stepper motor / 220 Servo motor

Application conditions

☐ No pulsation in the mouth ☐ Metering spray ☐ Cool down ☐ Wash

☐ Pressurization ☐ Circulation ☐ Lubricating ☐ Other

Your requirements

Please describe your application here or write down your remarks: