

Disclaimer:

As technology is constantly updated, materials and technical specifications are subject to change without notice. The supply status of the actual product shall be subject to the sales contract, and the sample is for reference only.

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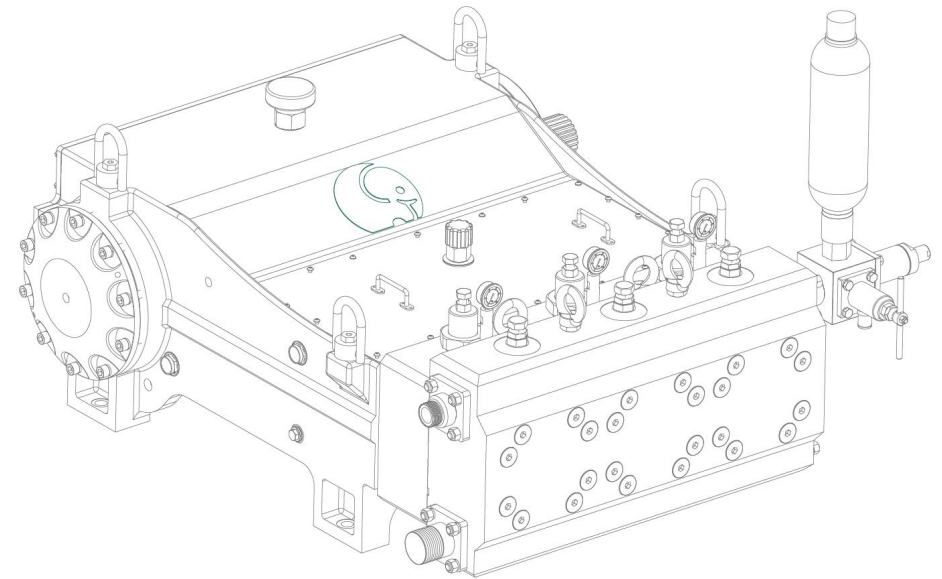
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# RECIPROCATING PUMPS

— Diaphragm Pump Series

Convenient, Reliable, Efficient, Intelligent





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# About Us

## Reciprocating Pump for All Application Fields Integrates R&D, Manufacturing, Sales, and Service



Elephant Machinery founded in 2008 and covering an area of 30,000 square meters, is a comprehensive enterprise integrating the R&D, manufacturing, sales, and service of full-application reciprocating pumps. We hold multiple invention patents and has obtained certifications including API Q1 Quality Management System, ISO 9001 Quality Management System, ISO 14001 Environmental Management System, Enterprise Intellectual Property Management System, Enterprise Integrity Management System, After-Sales Service Evaluation System, Green Factory, Five-Star Green Supply Chain Rating, AAA Corporate Credit Evaluation, and CE certification. We have been recognized as a National High-Tech Enterprise, Jiangsu Provincial "Specialized and Sophisticated" Enterprise, and Jiangsu Provincial Advanced-Level Intelligent Factory.

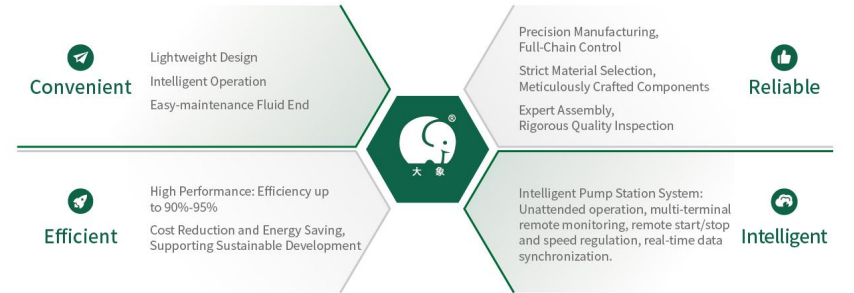
Elephant Machinery specializes in manufacturing reciprocating plunger pumps, piston pumps, and diaphragm pump series products. Designed and manufactured to comply with national standards GB/T9234-2018 and GB/T7782-2020, as well as international standards API674, API675, and ISO 13710:2004, our products meet diverse flow and pressure requirements across multiple industries. Our products are suitable for oilfield water injection boosting, chemical medium transportation, pharmaceutical precision metering, trenchless directional drilling, mining geothermal drilling, coal mine fracturing grouting, environmental wastewater treatment, high pressure water jetting, and food and beverage industries, delivering stable and reliable performance.

# Convenient, Reliable, Efficient, Intelligent

We will work in hand with friends from all works of life to move towards a more brilliant future.

Elephant Machinery's products mainly consist of three series: plunger pumps, piston pumps, and diaphragm pumps. Their power configurations include hydraulic motors, electric motors, and diesel engines. By adopting new technologies, new materials, and new processes, combined with advanced machining and testing equipment, our products feature compact structure, light weight, small footprint, appealing appearance, stable performance, long service life of wearing parts, and easy installation and maintenance.

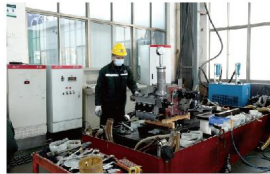
Elephant Machinery adheres to the "Product Supremacy" philosophy, committed to providing customers across various industries with convenient, reliable, efficient, and intelligent reciprocating pump products and complete solutions. We have earned high recognition from numerous well-known enterprises both domestically and internationally.



# Advanced Equipment



◀ Machining Center  
Test Platform  
▼



◀ Assembly Center  
Painting Workshop ▶

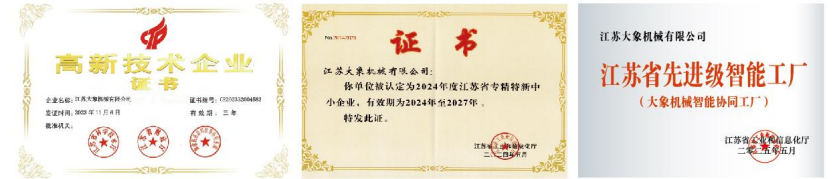


Inspection Center ▶



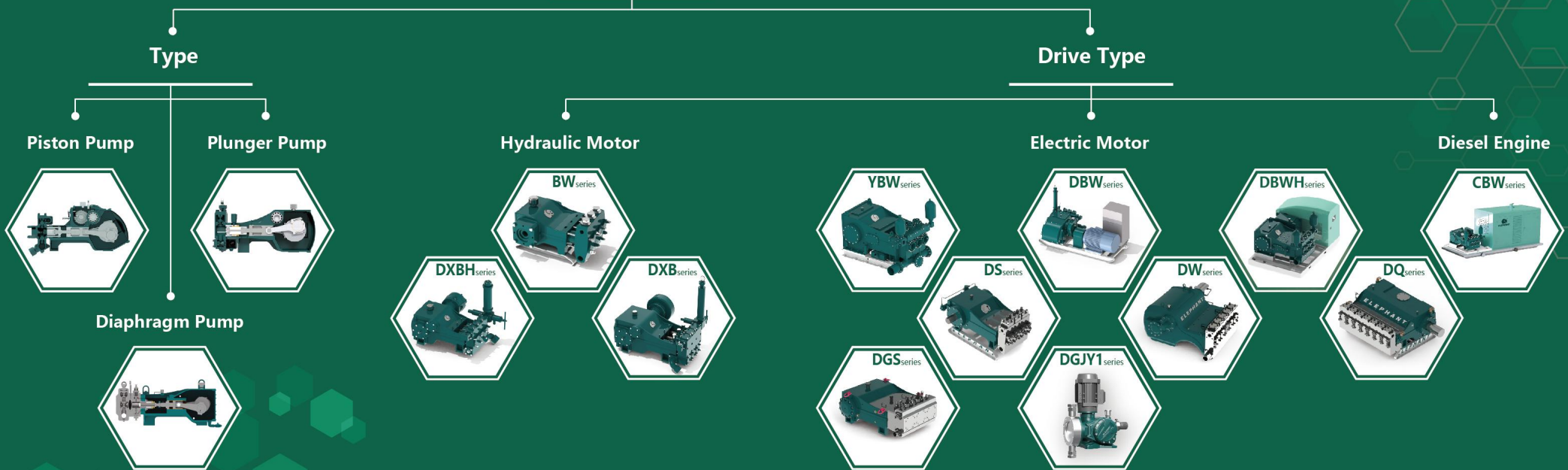
◀ Warehouse Management Center

# Certificates



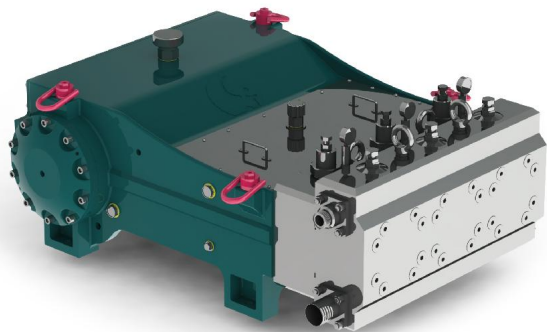
# Product Supremacy

## Reciprocating Pump



# High Pressure Process Diaphragm Pump

By adding a diaphragm chamber to the reciprocating positive displacement pump, a large-sized diaphragm separates the pump's fluid end from the power end. This design achieves high flow rates, high working pressures, and minimal pulsation, enabling leak-free transportation of flammable, explosive, toxic, and hazardous liquids. The product complies with Chinese National Standard GB/T9234-2018, Mechanical Industry Standard JB/T8697-2014, and international API674 standard.



## ▶ Working Principle

The reciprocating motion of the power end is uniformly transmitted to the diaphragm through hydraulic oil, causing the diaphragm to undergo reciprocating flexure. The diaphragm completely isolates the hydraulic system from the medium being transported. During the suction stroke, the volume of the medium chamber increases, the inlet valve opens while the outlet valve closes, and the medium is drawn in. During the discharge stroke, the volume of the medium chamber decreases, the outlet valve opens while the inlet valve closes, and the medium is discharged at high pressure under the push of the diaphragm.



## ▶ Technical Specifications

Flow Range:  $\leq 100 \text{ m}^3/\text{h}$   
Pressure Range:  $\leq 120 \text{ MPa}$

Model	Flow (m <sup>3</sup> /h)	Pressure (MPa)	Stroke (mm)	Cylinder Diameter (mm)	Stroke (r/min)	Power (KW)
DGS75-3.4/50.6	3.4	50.6	90	50	108	55
DGS75-4.9/35.1	4.9	35.1	90	60	108	55
DGS75-6.7/25.7	6.7	25.7	90	70	108	55
DGS75-11.1/15.5	11.1	15.5	90	90	108	55
DGS100-9.9/23.7	9.9	23.7	110	70	130	75
DGS100-16.3/14.4	16.3	14.4	110	90	130	75
DGS100-24.4/9.6	24.4	9.6	110	110	130	75
DGS150-16.6/20.7	16.6	20.7	130	70	185	110
DGS150-27.5/12.5	27.5	12.5	130	90	185	110
DGS150-41.1/8.4	41.1	8.4	130	110	185	110

## ▶ Application



# Mechanical Diaphragm Metering Pump

A reciprocating positive displacement pump designed for transferring water, water-like chemical liquids, as well as corrosive and non-corrosive fluids with viscosities up to 1,500 cps. Flow rate is adjustable within the range of 0–100%. The product complies with Chinese National Standard GB/T7782-2020 and International API 675 Standard.



## Working Principle

The electric motor delivers stable power, which is reduced in speed and increased in torque through a worm gear pair. The rotational motion is then precisely converted into linear reciprocating motion of the push rod via an eccentric mechanism, driving the mechanical diaphragm to achieve periodic elastic deformation. During contraction, the working chamber forms negative pressure, drawing in the medium. During expansion, positive pressure is generated, discharging the medium. Throughout the process, the flow remains stable and controllable, enabling high-precision metering and transfer.



## Technical Specifications

Single Pump Head Flow Range: ≤2800 L/h  
Pressure Range: ≤1.2 MPa

Model	Flow (L/h)	Pressure (MPa)	Stroke (mm)	Stroke (r/min)	Motor Power (KW)
DGJY1-150/1.2	150	1.2	4	90	0.37
DGJY1-250/1.2	250	1.2	6	105	0.37
DGJY1-350/1.2	350	1.2	6	144	0.37
DGJY1-500/1	500	1	6	144	0.55
DGJY1-660/1	660	1	8	144	0.55
DGJY1-820/1	820	1	8	180	0.75
DGJY1-1250/0.8	1250	0.8	8	90	0.75
DGJY1-1450/0.8	1450	0.8	10	105	1.5
DGJY1-2000/0.6	2000	0.6	10	144	1.5
DGJY1-2500/0.6	2500	0.6	10	180	1.5

\* For transporting highly corrosive, toxic, or other hazardous chemicals, a fluid end configuration with double diaphragms and a diaphragm rupture alarm device can be selected to prevent accidents caused by diaphragm failure.

\* If no safety relief device is integrated, a safety valve can be installed on the pump discharge pipeline.

\* Available pump head materials: PVC, PVDF, SS304, SS316, and other alloy materials.

## Application



Committed To Creating  
A World-class Reciprocating Pump Brand

