

## Pneumatic Diaphragm Pump

## Electric Diaphragm Pump



### Depamu (Hangzhou) Pumps Technology Co., Ltd.

Add.: No.658,20th Street,Qiantang New Area, Hangzhou, China P.C.:310018  
Tel.: +86-571-86400588 86403988 88992666(Domestic)  
+86-571-86878013(International)  
Fax: +86-571-86408588 Http://www.depamu.com  
Email: depamu@depamu.com (Domestic)  
international@depamu.com (International)



All Rights Reserved  
Edition 2023A

400-809-6100  
www.depamu.com

Depamu (Hangzhou) Pumps Technology Co., Ltd.



**PACESETTER OF FLUID  
EQUIPMENT IN THE WORLD**

全球流体装备的领跑者







# Contents

## Image

03/Enterprise Profile

04/Enterprise Qualification  
Certificates

05/Delicacy Management

## Products

07/ Product Introduction

08/ Product Model

09/ Product Series

15/ Powder Pump

16/ Pneumatic Diaphragm  
Pump with Detection Device

17/ Diaphragm Pump with  
Leakage Detection Device

18/ Sanitary Diaphragm Pump

19/ Pneumatic Diaphragm Pump

21/ Global Service System

# Enterprise Profile

Depamu (Hangzhou) Pumps Technology Co., Ltd., located in Hangzhou Qiantang District, is a high-tech enterprise specialized in R & D, production and sales of main products including metering pumps (plunger/diaphragm), high-pressure process reciprocating pumps (plunger/diaphragm/hose), electric diaphragm pumps, pneumatic diaphragm pumps, screw pumps (one/two/three-screw), lobe pumps (rubber/metal), centrifugal pumps, cryogenic pumps, chemical dosing packages, water-steam sampling equipment, supercritical fluid equipment and water treatment equipment, etc.

Through introduction of advanced technologies from Germany, the company has been devoted to research and development of fluid transfer equipment since establishment, and has successfully obtained over 100 technical patents through continuous technological innovation. The company has passed API, CE, EAC and ISO (9001/14001/45001) certifications; at the same time, it serves as a drafter of pump industry standards. The company has been awarded the National Key "Little Giant" Honor for Specialized, Sophisticated, Distinctive and Innovative SMEs and its high pressure process hose pumps have been identified as the Major Equipment (1st Set) Product underwritten by Ping An Insurance.

Presently, company products have been widely applied to oil & gas field exploitation, petroleum and gas refining and transportation as well as industries of nuclear power, military, chemical, electric power, pulp & paper, pharmaceutical, food, new energy, water treatment, etc. Based on establishment of long-term strategic partnerships with large-scale enterprises like CNPC, SINOPEC, CNOOC, CNNC, etc., products have been exported to over 50 countries and regions, like the USA, the UK, France, Switzerland, India, Brazil, etc. The company aims to be the most competitive fluid equipment developer, manufacturer and service supplier in the world, and build Depamu into a century-old global brand.



# Enterprise Qualification Certificates



Certificate of National High-tech Enterprise (P. R. C.)      National Key "Little Giant" Honor for Specialized, Sophisticated, Distinctive and Innovative SMEs of the P. R. C.      China Pump Testing Center      Certificate of the Major Equipment (1st Set) Product in Zhejiang Province



Production License for Special Equipment (Pressure Pipe Component Manufacture)      Production License for Special Equipment (Pressure Vessel Manufacture)      Production License for Special Equipment (Industrial Pipe Installation)



API Certificate      EAC Certificate      CE Certificate      "Qualified Supplier of CNNC" Certificate



ISO 9001 Certificate      ISO 14001 Certificate      ISO 45001 Certificate      Invention Patent      Invention Patent



# Delicacy Management

Depamu has kept a leading role in the industry by adhering to the spirit of innovation and aggressiveness based on excellent personnel, advanced equipment, first-rank standard, strict management as well as perfect service system to create a key high-tech enterprise with the biggest influence.



Intelligence Warehouse Management

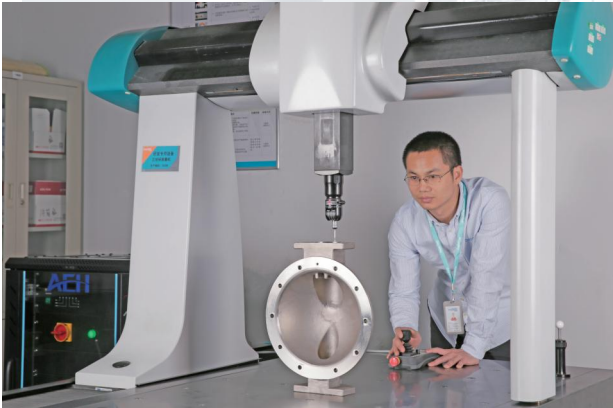


Digital Processing Equipment



Excellent Team

3-coordinate Detection Equipment



Mass Production Line



High strength aluminum alloy casing



Professional Assembler



Imported Brand Standard Parts



Advanced Detection Equipment





# Product Introduction

Pneumatic diaphragm pumps, equipped with simple and highly reliable air reversing valves, realize the largest reliability under all kinds of applications. An air reversing valve, a three-way pilot valve, can ensure absolutely no viscosity. All parts can be replaced without the need in opening of hydraulic chambers. Aluminum parts, through anodic oxidation treatment and epoxy coating application, can resist to corrosion by unclean air.

## Application Scope

Petrochemical, environmental protection, water treatment, food, pharmacy, paper-making, daily chemical, chemical fiber coating, mining, fire-fighting, agriculture, vehicle-mounting, etc.

## Product Features

- ▶ A reversing shaft in integral structure ensures concentricity and renders more smooth action;
- ▶ A filter ensures normal operation of air motor;
- ▶ A ceramic or SS guide block can fit all kinds of service conditions;
- ▶ A piston end cover in screw-free structure can be easily installed;
- ▶ An external air motor can be easily maintained;
- ▶ Engineering plastics are used, thus realizing resource conservation;
- ▶ Compared with other diaphragm pumps, a pneumatic diaphragm pump involves few moving parts;
- ▶ A same-type reversing valve fits pumps of different specifications;
- ▶ An air valve has 15-year quality assurance and a pump has 5 years quality assurance.

# Product Model

## DPQ(D) Series Pneumatic Diaphragm Pump

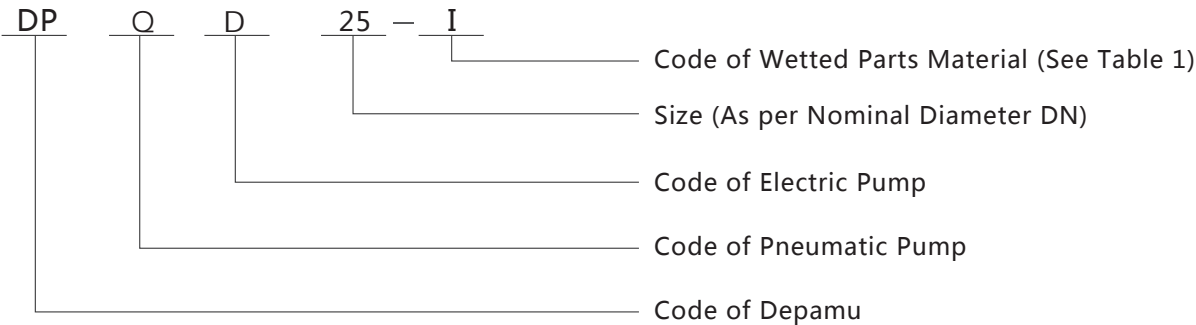


Table 1 Code of Wetted Parts Material

| Code     | I   | II  | III  | VI   | VII | VIII      | XV             | XVI    |
|----------|-----|-----|------|------|-----|-----------|----------------|--------|
| Material | 304 | 316 | 316L | PVDF | PP  | Cast Iron | Aluminum Alloy | Others |

Note: Working pressure of materials with “\*” is below 1.6Mpa.

## Necessary Information for Pneumatic Diaphragm Pump Selection

To provide you with the most suitable pneumatic diaphragm pumps, please inform technical parameters below as detailed as possible at ordering.

### 1.Technical Pump Conditions

- Maximum Working Capacity: m³/h
- Maximum Actual Head: m
- Maximum Actual Outlet Pressure: Mpa
- Wetted Parts Material: 304, 316, PVC, PTFE, Hastelloy C, etc.
- Maximum Suction Head: m
- Maximum Passable Size: mm
- Maximum Air Supply Pressure: MPa
- Maximum Air Consumption: m³/min

### 2.Description of Pumped Liquid

- Liquid:
- Concentration: %
- Temperature: °C
- Density: kg/cm²
- Viscosity: Pa.s
- Corrosiveness: PH
- Particle Content and Size: µm

# Product Series

## ▶ DPQ-10 Pneumatic Diaphragm Pump



- ▶ Easy repairing of air valve and valve seat
- ▶ Low noise

- ▶ 10mm≈3/8寸
- ▶ Materials include 10mm≈3/8in PP, PVDF, acetal, aluminum alloy, SS, etc.
- ▶ Maximum working pressure 100psi ( 0.7Mpa , 7 bar )
- ▶ Maximum Capacity 38lpm ( 2.28m³/h )
- ▶ Air inlet size 1/4in.npt ( f )
- ▶ Air outlet size 1/4in.npt ( f )
- ▶ Liquid inlet size 3/8in.npt ( f )
- ▶ Liquid outlet size 3/8in.npt ( f )
- ▶ Connection: thread

### ▶ Weight

|                 |       |                 |       |
|-----------------|-------|-----------------|-------|
| Stainless Steel | 6.8kg | Plastics (PVDF) | 3.4kg |
| Aluminum Alloy  | 3.9kg | Plastics (PP)   | 2.5kg |

# Product Series

## ▶ DPQ-15 Pneumatic Diaphragm Pump



- ▶ Multi-port design allows easy mounting
- ▶ External connection with solenoid valve allows easy remote operation
- ▶ Rapid start-up and strong self-priming ability

- ▶ Liquid inlet and outlet size 1/2"NPT ( or DN 15 Flange )
- ▶ Air inlet size 1/4"NPT
- ▶ Air outlet size 3/8"NPT
- ▶ Maximum working pressure 100psi (0.7 Mpa,7 bar)
- ▶ Maximum Capacity 15gpm (57 L/min)
- ▶ Maximum Siphon (Dry Suction) 4.5m
- ▶ Maximum Size of Solids Handling 2.5mm
- ▶ Maximum Air Consumption 20gpm (10L/s)
- ▶ Maximum Strokes 400cpm
- ▶ Air Distribution Valve No-lube, No-stall Design

### ▶ Weight

|                 |       |                 |       |
|-----------------|-------|-----------------|-------|
| Stainless Steel | 6.8kg | Plastics (PVDF) | 3.7kg |
| Aluminum Alloy  | 4.5kg | Plastics (PP)   | 2.8kg |

# Product Series

## ▶ DPQ-25 Pneumatic Diaphragm Pump



- ▶ Small size and big capacity (up to 150L/min)
- ▶ Gas valve body with anti-corrosion coating
- ▶ Reliable air reversing valve
- ▶ Brand-new plastic diaphragm gas valve body applicable to corrosive gas

- ▶ Liquid inlet and outlet size 1"NPT ( or DN 25 Flange )
- ▶ Air inlet size 1/2"NPT
- ▶ Air outlet size 3/4"NPT
- ▶ Maximum working pressure 120psi (0.84 Mpa,8.4 bar)
- ▶ Maximum Capacity 40gpm ( 150L/min )
- ▶ Maximum Siphon (Dry Suction) 5.48m
- ▶ Maximum Size of Solids Handling 4mm
- ▶ Maximum Air Consumption 45scfm (22.5L/s)
- ▶ Maximum Strokes 276cpm
- ▶ Air Distribution Valve No-lube, No-stall Design

### ▶ Weight

|                 |       |          |     |
|-----------------|-------|----------|-----|
| Stainless Steel | 15kg  | Plastics | 8kg |
| Aluminum Alloy  | 8.2kg |          |     |

# 产品系列 Product Line

## ▶ DPQ-40 Pneumatic Diaphragm Pump



- ▶ Small size and big capacity (up to 340L/min)
- ▶ Gas valve body with anti-corrosion coating
- ▶ Reliable air reversing valve
- ▶ Brand-new plastic diaphragm gas valve body applicable to corrosive gas

- ▶ Liquid inlet and outlet size 1-1/2"NPT ( or DN 40 Flange )
- ▶ Air inlet size 1/2"NPT
- ▶ Air outlet size 1/2"NPT
- ▶ Maximum working pressure 120psi (0.84 Mpa,8.4 bar)
- ▶ Maximum Capacity 118gpm (445 L/min)
- ▶ Maximum Siphon (Dry Suction) 5m
- ▶ Maximum Size of Solids Handling 5mm
- ▶ Maximum Air Consumption 80scfm (40L/s)
- ▶ Maximum Strokes 200cpm
- ▶ Air Distribution Valve No-lube, No-stall Design

### ▶ Weight

|                 |      |           |      |
|-----------------|------|-----------|------|
| Stainless Steel | 32kg | Plastics  | 16kg |
| Aluminum Alloy  | 16kg | Cast Iron | 32kg |



# Product Series

## ▶ DPQ-50 Pneumatic Diaphragm Pump



- ▶ Pilot-operated air valve can be repaired externally without the need in inner chamber opening
- ▶ Epoxy coating can resist severe service conditions
- ▶ Brand-new plastic diaphragm gas valve body applicable to corrosive gas

- ▶ Liquid inlet and outlet size2''NPT ( or DN 50 Flange )
- ▶ Air inlet size1/2''NPT
- ▶ Air outlet size3/4''NPT
- ▶ Maximum working pressure120psi (0.84 Mpa,8.4 bar)
- ▶ Maximum Capacity150gpm (568L/min)
- ▶ Maximum Siphon (Dry Suction)5m
- ▶ Maximum Size of Solids Handling6mm
- ▶ Maximum Air Consumption140scfm (70L/s)
- ▶ Maximum Strokes145cpm
- ▶ Air Distribution ValveNo-lube, No-stall Design

### ▶ Weight

|                 |      |           |      |
|-----------------|------|-----------|------|
| Stainless Steel | 51kg | Plastics  | 23kg |
| Aluminum Alloy  | 29kg | Cast Iron | 56kg |

# Product Series

## ▶ DPQ-80 Pneumatic Diaphragm Pump



- ▶ Pilot-operated air valve can be repaired externally without the need in inner chamber opening
- ▶ Epoxy coating can resist severe service conditions

- ▶ Liquid inlet and outlet size3''NPT ( or DN 80 Flange )
- ▶ Air inlet size3/4''NPT
- ▶ Air outlet size1'' NPT
- ▶ Maximum working pressure120psi (0.84 Mpa,8.4 bar)
- ▶ Maximum Capacity275gpm (1022L/min)
- ▶ Maximum Siphon (Dry Suction)5m
- ▶ Maximum Size of Solids Handling9.4mm
- ▶ Maximum Air Consumption180scfm (90L/s)
- ▶ Maximum Strokes135cpm
- ▶ Air Distribution ValveNo-lube, No-stall Design

### ▶ Weight

|                 |       |           |       |
|-----------------|-------|-----------|-------|
| Stainless Steel | 110kg | Plastics  | 66kg  |
| Aluminum Alloy  | 77kg  | Cast Iron | 176kg |



## Powder Pump

### ▶ Product Introduction



### ▶ Function

A powder pump, a brand-new pneumatic high-efficiency light-weight powder transfer pump, can deliver and handle all types of powder prepared through dry process in a more rapid and cleaner way; in a completely enclosed transfer mode, the pump can directly deliver powder to the designated equipment, reducing powder pollution to working environment; it can be used in a mobile way, mounted and debugged in a convenient way.

### ▶ Purpose

A powder pump can be effectively applied to transport of dry powder in many types (such as organic powder in pigment and plastics industries like plasticizers, flame retardants, acrylic resins, silicon resins, etc.), light-weight powder transport in fine chemical industry, manufacturing industry of pharmaceutical raw materials and intermediates as well as other industries.

## Diaphragm Pump with Leakage Detection Device

### ▶ Product Introduction



### ▶ Function

Anti-leak alarm device can prevent leaking of pumped liquid while running, can timely detect any damage of rubber diaphragm inside a pneumatic diaphragm pump and stop the pump right away.

### ▶ Signal Prompt

After rubber diaphragm damage, proximity switch connect with alarm signal light in system control room and alarm bell is activated.

### ▶ Control System

System control room connects with and controls alarm device, and controls air supply solenoid valve; control room can activate working of alarm device and shut off air supply via solenoid valve.

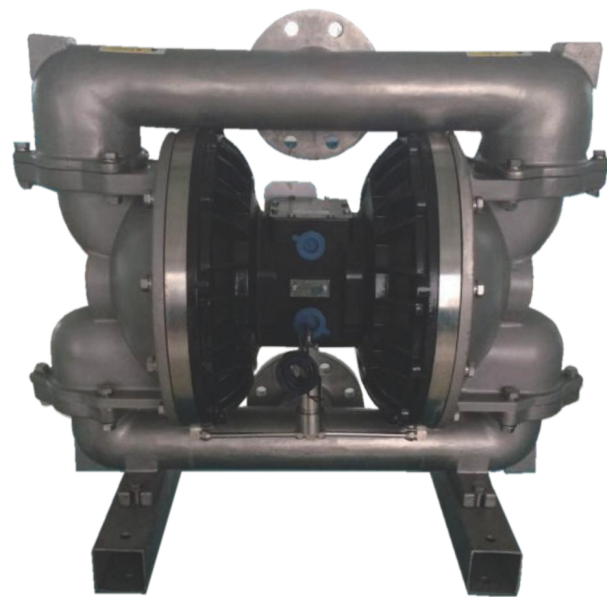
### ▶ Purpose

Hazardous areas like electronics factories, nuclear power plants, large ships, chemical plants, etc.



## Diaphragm Pump with Leakage Detection Device

### ▶ Product Introduction



#### ▶ Function

Anti-leak alarm device can prevent leaking of pumped liquid while running, can timely detect any damage of rubber diaphragm inside a pneumatic diaphragm pump and stop the pump right away.

#### ▶ Signal Prompt

After rubber diaphragm damage, proximity switch connect with alarm signal light in system control room and alarm bell is activated.

#### ▶ Control System

System control room connects with and controls alarm device, and controls air supply solenoid valve; control room can activate working of alarm device and shut off air supply via solenoid valve.

#### ▶ Purpose

Hazardous areas like electronics factories, nuclear power plants, large ships, chemical plants, etc.

## Sanitary diaphragm pump

### ▶ Product Introduction



#### ▶ Function

A sanitary diaphragm pump, also called as sanitary pneumatic diaphragm pump, features no sealing, explosion protection, little shear, easy repairing, allowed idling, light-weight, self-priming start-up, etc. just the same with a general diaphragm pump; besides, it has excellent sanitary performance and can meet requirement of high sanitary grade operations in food, drinking, pharmaceutical industries.

#### ▶ Purpose

Main application to pharmaceutical, food and portable water industries.



# Electric Diaphragm Pump

## Product Introduction



Depamu electric diaphragm pumps, based on multiple globally leading technologies, can transport corrosive, viscous, volatile, inflammable and toxic liquids as well as liquids with particles, and are recognized as fluid transport pumps with high safety.

## Working Principle

An electric diaphragm pump, a type in a special structure of positive displacement pumps, is composed of mechanical drive and diaphragm pump head.

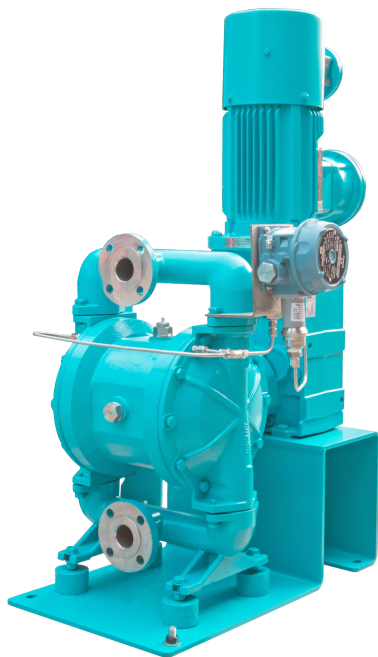
## Main Features

- ▶ PTFE diaphragms through special compression moulding feature good mechanical performance and resistance to corrosion by strong acids, bases, acids and solvents.
- ▶ Highly sensitive and reliable double-diaphragm assembly with pressure conduction or on-off alarm can realize local display, signal output and pump safety running monitoring all the time.
- ▶ Check valve assembly resistive to bonding and precipitation allows fluid transport of high viscosity and with particles generating little vibration or noise.

- ▶ Hydraulic end and back-pressure structure can both be used.
- ▶ Eccentric shaft in crankshaft structure with bearing fixed on both ends achieves high loading and durability.
- ▶ A reciprocating cross-shaped sliding shaft connected with diaphragm renders performance much more better than a bow-shaped shaft.
- ▶ Drive by vertical bevel gear reducer renders large transmission torque, high mechanical efficiency, little noise, reasonable structure and beautiful appearance.
- ▶ German glyd ring for internal pump sealing achieves a small friction coefficient and good sealing effect.

## Main Applications

- ▶ Sewage suction.
- ▶ Suction of chemical etchants, petroleum and slurries.
- ▶ Suction of toxic, inflammable and volatile liquids.
- ▶ Suction of strong acids, strong bases and highly corrosive liquids.
- ▶ Suction of high-temp liquids below 150°C.
- ▶ Former pressure delivery devices for solid-liquid separation devices.

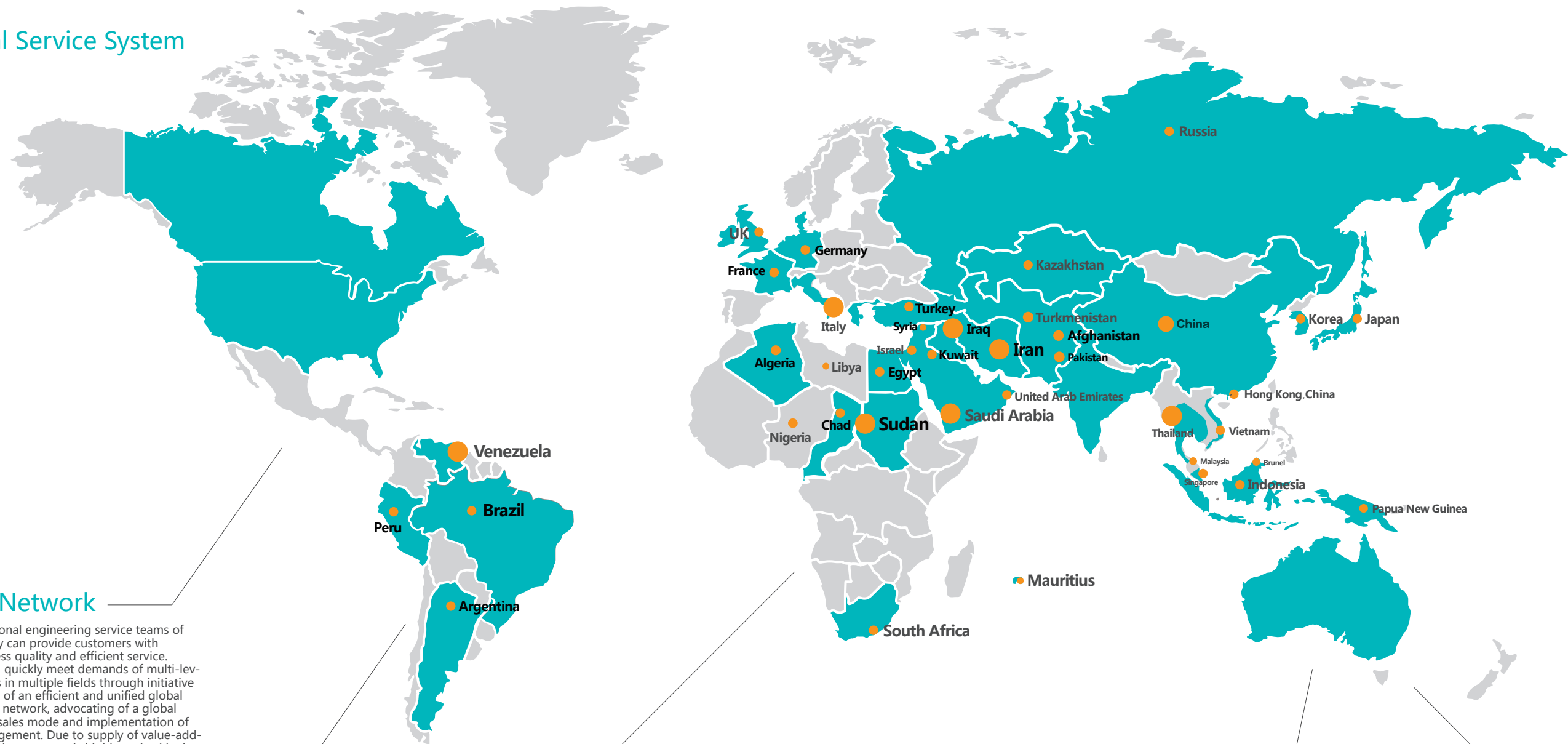


## Technical Data

Selection Table for Electric Diaphragm Pump Models and Performance Parameters

| Model   | Inlet and Outlet Size | Capacity | Head | Suction Head | Maximum Passable Particle Size | Motor Power |
|---------|-----------------------|----------|------|--------------|--------------------------------|-------------|
|         | mm                    | m³/h     | m    | m            | mm                             | KW          |
| DPD-10  | 10                    | 0.5      | 30   | 3            | 1                              | 0.55        |
| DPD-15  | 15                    | 0.75     | 30   | 3            | 1.5                            | 0.55        |
| DPD-25  | 25                    | 3.5      | 30   | 4            | 2                              | 1.5         |
| DPD-40  | 40                    | 4.5      | 30   | 4            | 2.5                            | 1.5         |
| DPD-50  | 50                    | 6.5      | 30   | 4.5          | 2.5                            | 2.2         |
| DPD-65  | 65                    | 8        | 30   | 4.5          | 3.2                            | 2.2         |
| DPD-80  | 80                    | 16       | 30   | 5            | 4                              | 3           |
| DPD-100 | 100                   | 20       | 30   | 5            | 4.5                            | 4           |

## ► Global Service System



## ► Sales Network

The professional engineering service teams of the company can provide customers with whole-process quality and efficient service. Depamu can quickly meet demands of multi-level customers in multiple fields through initiative construction of an efficient and unified global sales service network, advocating of a global localization sales mode and implementation of brand management. Due to supply of value-added services, the company is highly praised by its customers.

## ► Customer Orientation

The company has built a global service network sincerely offering pre-sales and after-sales services.

## ► Integrated Services

- Vibration Analysis
- Medium Assessment
- Site Commissioning
- System Testing
- Service and Repairing Contract
- Global Service
- Diagnosis of Change in Operation Conditions
- Extension and Modification of Running Pump and System

## ► Solution for Extensible System

- Pump Instrumentation
- VFD Flow Adjustment
- Operation Interface of Guidance System
- Electronic Control of Online and Offline Monitoring System

## ► Consulting and Engineering with Special Requirements

Depamu products are widely applied all over the world, which brings lots of experience where the company can learn and benefit. As a supplier of solutions and systems for liquid delivery equipment application, we can provide personalized solutions from the smallest independent unit to the biggest multi-link pump installation; at the same time, we can provide technical engineering consulting for complex processes as well as solutions meeting the needs of special processes.

- Fluid Evaluation
- Independent Design Conception
- Cost Calculation for Installation Project
- Commissioning and Service
- Seminars and Site Training