

Membrane Pumps  
Solids Handling Pumps  
High Pressure Pumps  
Marine Pumps

[www.serviceprocess.net](http://www.serviceprocess.net)

Service Process Equipment, Inc.

PO Box 850908

Mobile AL 36685-0908

251.342.1313•Fax 251.342.1377

Email [msellers@serviceprocess.net](mailto:msellers@serviceprocess.net)

# ABEL Positive Displacement Pumps

Unit Packages for Effective Transfer  
of Aggressive Fluids and Solids



**The International Experts**

**ABEL**<sup>®</sup>  
Pump Technology

# ABEL Reciprocating Positive Displacement Pumps Development + Design + Manufacture + Service

## Specialization Creates Know-How

With the diversity of pump technologies, and the number of quality manufacturers from which to choose, it is a challenge to select the brand and technology that best match your critical needs. Reasons to select the ABEL brand and its product offering include:

### ▲ Specialization

ABEL has developed a decisive market lead in “know-how” with its unique reciprocating, positive displacement pump technologies. Customized and modular unit packages supported by all functional areas of ABEL have attained high customer retention rates, through satisfaction in performance, reliability, and economy over the life cycle of the products.

### ▲ Field Proven Experience

In handling sludges, slurries, solids, and a variety of aggressive fluids, ABEL has developed an extensive record of application knowledge. The know-how of What & What Not to do positions ABEL uniquely to fulfill customer needs.

### ▲ Market Knowledge

ABEL has attained a recognized leadership position in the supply of its piston membrane technology for filter press feed. ABEL, is also making advances with its latest product range: the Electromechanical Membrane Pumps. This membrane (diaphragm) design is realizing dramatic industrial growth where customers seek solutions to: regulated flow, seal-less, self-priming performance, high flow rates, and control of product life cycle costs.



### ▲ Manufacturing Excellence

ABEL GmbH & Co. KG was among the first hundred German mechanical engineering companies who, in 1991, submitted their entire company activities to the standards of DIN ISO 9001.

### ▲ Service

ABEL field service technicians are available around the globe for start-up, diagnostics, repair, training, and upgrading of product. They are backed by product and market specialists who qualify needs, present value choices, process requirements, and sustain attention to customer needs long after the product is sold.



# ABEL EM – Electromechanical Membrane Pumps

Capacity to 530 US GPM (120 m<sup>3</sup>/h), Pressures to 115 PSI (0.8 MPa)

## ABEL EM Metal



**Capacity range:**  
**Up to 530 GPM (120 m<sup>3</sup>/h)**  
**Up to 115 PSI (0.8 MPa)**

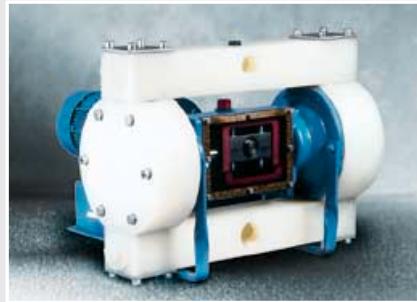
The **ABEL EM Metal** is available in three material designs: ductile iron (SG), stainless steel (ED), or aluminum (AL)

By properly matching the selection of fluid compatible materials in membranes, check balls, and valve seats, an optimal material combination is realized that produces customer satisfaction.

### ABEL EM Metal

- Water and sewage industry
- Ceramic industry
- Land drainage
- Marble and stone plants
- Navigation, offshore
- Automobile industry
- Mechanical engineering
- Fire-fighting
- Paper industry
- Mining engineering
- Lacquer and paint industry
- Road tankers

## ABEL EM Plastic



**Capacity range:**  
**Up to 175 GPM (40 m<sup>3</sup>/h)**  
**Up to 115 PSI (0.8 MPa)**

In the chemical industry and critical areas of process technology, aggressive fluids require the use of high quality plastic construction for wetted components. **ABEL EM Plastic** offers polypropylene (PP) or PVDF (PV).

Corrosion protection is also available for the non-wetted side of the pump, as well as explosion proof motors, and VFD control.

### ABEL EM Plastic

- Chemical industry
- Pharmaceutical industry
- Refineries
- Power plants

### ABEL EM pump applications

- Process pumps for liquids and powders
- Filter press feed
- Centrifuge feed and metering
- Alternative technology for others too costly to maintain



ABEL offers a variety of accessories that offer safety, ease of operation, and flow control.

# ABEL CM / HM / HMT

Capacity up to 1760 GPM (400 m<sup>3</sup>/h), Pressures to 3625 PSI (25 MPa)

## ABEL CM



**Capacity range:**  
up to 990 GPM (225 m<sup>3</sup>/h)  
up to 1450 PSI (10 MPa)

**ABEL CM Compact Membrane Pumps** are simplex, single or double-acting designs particularly well suited for difficult fluids. Day after day they perform with a high degree of reliability and wear resistance in continuous operation. The CM series excels under extremely demanding service.

Available construction includes: ductile iron, rubber-lined, stainless steel, cast steel, and polypropylene.

### ABEL CM Pumps - Specializing in difficult applications:

- Sludge transfer
- Filter Press feed
- Spray dryer feed
- Raw waste water transfer
- Transfer of abrasive, corrosive, acidic, alkaline, pigmented, viscous, and granular fluids

### difficult applications:

- Chemical/Petrochemical
- Power Plants
- Mining

## ABEL HM



**Capacity range:**  
up to 510 GPM (116 m<sup>3</sup>/h)  
up to 1450 PSI (10 MPa)

**ABEL HM Hydraulic Membrane Pumps** incorporate a newly designed, preformed membrane for enhanced life, and simplified mechanical system that ensures membrane positioning and pressure control.

The ABEL HM series is available in simplex single and double-acting design. HM performance is characterized by high efficiency, smooth running, and reliability. Available in same materials as CM series.

### Applications include:

- Filter Press feed
- Sludge transfer
- Spray dryer feed
- Incinerator feed
- Metering

### Markets served:

- Ceramic
- Waste Water Treatment
- Mining
- Cement
- Electro-plating
- Chemical/Petrochemical
- Automobile

## ABEL HMT



**Capacity range:**  
up to 1761 GPM (400 m<sup>3</sup>/h)  
up to 3625 PSI (25 MPa)

The **ABEL HMT Hydraulic Membrane Pump** introduces the next generation of process pumps for higher flow rates and pressures.

The ABEL HMT is a single-action, slow stroking Triplex Piston Membrane Pump design with dry run protection.

The HMT design is an ideal solution for fluids with high solids content and high specific gravity. Available construction includes: ductile iron and cast steel.

### Applications include:

- Sludge Transfer
- Backfilling
- Reactor feed
- Process Applications

### Markets served:

- Mining
- Chemical
- Petrochemical
- Off-shore platform operations

## ABEL HP / SH / SM

Capacity to 1175 GPM (267 m<sup>3</sup>/h), Pressures to 2320 PSI (16 MPa)

### ABEL HP



**Capacity range:**  
up to 240 GPM (55 m<sup>3</sup>/h)  
up to 3620 PSI (25 MPa)

**ABEL HP – High Pressure pumps** are field proven in heavy-duty continuous operation. A single-acting triplex, reciprocating, plunger pump is supplied with an integral bypass system when used in conjunction with a filter press cloth washing system.

Available in ductile iron or stainless steel construction.

Customized units for higher pressure and flow rates are available.

#### Cleaning Applications include:

- Filter Cloths
- Containers
- Equipment
- Pipelines

#### Feeding/charging applications:

- Reverse osmosis plants
- Boilers
- Reactors
- Other

### ABEL SH



**Capacity range:**  
up to 455 GPM (103 m<sup>3</sup>/h)  
up to 2320 PSI (16 MPa)

**ABEL SH – Solids Handling pumps** offer an extensive range of flow rates in the service of an equally broad variety of applications.

Four components comprise the entire pump package:

- a) The basic pump
- b) The hydraulic drive unit
- c) A screw conveyor to feed the product cylinders.
- d) A control cabinet with PLC... that provides for integration with complex processes and control systems

#### Applications areas include:

- Transfer of dewatered sludges or filter cakes from:
  - industry or communities
  - centrifuges, chamber filter, vacuum and belt presses
- Furnace feed with dewatered and pre-dried sludge, hazardous waste, chemical residues and solvents
- For mining engineering in backfilling and grout

### ABEL SM



**Capacity range:**  
up to 1175 GPM (267 m<sup>3</sup>/h)  
up to 580 PSI (4 MPa)

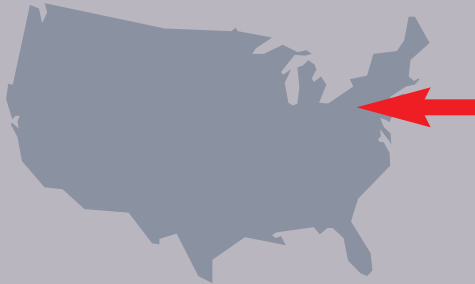
**ABEL SM – Spherical Membrane pumps** have evolved over several decades to serve higher flow requirements with continuous duty, along with the expectation of minimal maintenance cost over the extended product life cycle.

The SM pumps are duplex double-acting pumps, with optional VFD controls, that operate at low speeds for smooth operation and reduced maintenance requirements. The simple modular design ensures reliability of performance and minimal attention. This design is especially well suited for pipeline service.

#### Applications areas include:

- Sludge transfer
- Filter press feed
- Water processing
- Mine dewatering
- Flue gas desulphurization
- Ceramic manufacturing

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ABEL Pumps, L.P.  
 79 N. Industrial Park  
 207 Overlook Dr  
 Sewickley, Pennsylvania  
 PA 15143-2339 USA  
 Tel: 412 741 3222  
 Fax: 412 741 2599  
 mail@abelpumps.com  
 www.abelpumps.com

**Assistance:**

The qualified staff of ABEL Pumps, L.P. is ready to assist you with your critical needs.

Please contact us with your specific requirements.

**Services include:**

- ▲ Start-up
- ▲ Training
- ▲ Installation
- ▲ Repair
- ▲ Warranty Contracts
- ▲ Upgrades
- ▲ Telephone Diagnostics
- ▲ On Site Repairs
- ▲ Part Kits
- ▲ Qualified Representatives for Local Assistance

**Certifications:**

- ▲ ISO 9001
- ▲ MIL-I-45208A

**Helpful Information:**

Company:	e-mail:
Address:	Tel./Fax:
	Contact:
Application:	Why needed?
	Temperature:
Fluid:	Sp. Gr.:
Flow Rate:	Pressure:
Solids? % & size:	Viscosity:
Operating Cycle:	Special Materials:

**Combined Slurry:**

% Solids ..... 1) By Weight ..... 2) By volume .....

Abrasivity (Miller Number) ..... PH Value .....

Viscosity ..... Describe consistency .....

Remarks:

**Thank you for the opportunity to be of service! – ABEL Pumps, L.P.**