

Membrane Pumps
Solids Handling Pumps
High Pressure Pumps
Marine Pumps

ABEL Positive Displacement Pumps

Units for Process Engineering
and optimal Solids Transport



The International Experts

ABEL[®]
Pump Technology

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

Specialisation creates Know-How

When you are confronted with the decision concerning investments in the pump technology, you have the option of thousands of manufacturers worldwide. Almost all of them use first-class raw materials and modern production methods. Many of them have a functioning quality assurance system. Therefore, it does not matter how you decide.

Doesn't it really matter?

Specialisation creates Know-How

The physics of the different pump principles fundamentally differ from each other. Anybody mastering fluid machines in their function cannot utilise this knowledge in the field of positive displacement pumps – and vice versa.

The decisive lead in know-how results from focusing. Only who specialises has the chance to gain experience, without which the real advanced technology does not and cannot develop.

ABEL focuses on reciprocating positive displacement pumps – on development, design, manufacture, marketing and, last but not least, service. Customized for your application.

One of the most comprehensive market surveys so far carried out by the "Hydraulic Institute" in the U.S. reveals: With our piston membrane pumps, tried and tested in practice over five decades, ABEL has, for example, attained the world market leadership in filter press feeding as well as with the latest product range: the Electromechanical Membrane Pumps.



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, this was scarcely known at that time. After three successful certification procedures we now have the lead which has grown over many years in the application of our quality management system.

This can be seen in the detail:

- ▲ Monthly quality circle
- ▲ Daily set/actual schedule comparisons
- ▲ Final acceptance test for each pump.

ABEL EM - Electromechanical Membrane Pumps

Capacity ranges up to 120 m³/h, up to 0.8 MPa

ABEL EM Metal



Capacity range:
up to 120 m³/h; up to 0.8 MPa

The **ABEL EM Metal** is available in three different metal designs: Nodular cast iron (SG), stainless steel (ED) or aluminium (AI).

Through purposeful use of suitable, resistant materials for membranes, valve seats and balls you will achieve the best possible material combination for your application.

ABEL EM Plastic



Capacity range:
up to 40 m³/h; up to 0.8 MPa

In the chemical industry and in other areas of process technology aggressive media require the use of high-quality plastics such as polypropylenes (PP), PVDF (PV) or PTFE (PT), as well as explosion proof motors.

With **ABEL EM Plastic** ABEL provides excellent technology for these applications with flow rates up to max. 40 m³/h.

ABEL EM Food



Capacity range:
up to 20 m³/h; up to 0.25 MPa

With **ABEL EM Food** a food compliant stainless steel design (EF) is available.

The flow-optimised design of this pump avoids dead spaces and enables easy rinsing and cleaning according to the methods [CIP] and [SIP].

All product-contacting materials such as membranes, balls and seats are available in FDA approved materials.

ABEL EM eco-line



Capacity range:
up to 20 m³/h; up to 0,25 MPa

The **ABEL EM eco-line** is available for all low and high viscosity liquids up to the transfer of fluidised dry powders.

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

- Chemical industry
- Pharmaceutical industry
- Refineries
- Power plants

ABEL EM Food

- Brewing/beverage industry
- Food industry

ABEL EM pump application

- Process pumps for the transfer of liquids and powders
- Filter press feeding
- Centrifuge feeding for metering

The **ABEL accessories program** enables the individual use of electro-mechanical membrane pumps EM in your production.



ABEL CM / HM / HMT

Capacity ranges up to 225 m³/h, up to 25.0 MPa

ABEL CM



Capacity range:
 up to 225 m³/h; up to 10.0 MPa

ABEL CM compact membrane pumps are simplex, single or double-acting specialists for difficult media. Day by day they underline their high availability and wear resistance in continuous operation. In extreme situations they are in their element.

ABEL CM Pumps – Specialists for difficult media

- Sludge transfer
- Filter press or spray dryer feeding
- Raw water transfer
- Transfer of abrasive, corrosive, acidic, alkaline, pigmented, viscous and granular media

ABEL HM



Capacity range:
 up to 116 m³/h; up to 10.0 MPa

The **ABEL HM Hydraulic Membrane Pumps** are equipped with a newly designed, preformed membrane and mechanical, pressure equalised membrane positioning.

The ABEL HM series is available in simplex single and double-acting design. It is characterised by high efficiency, smooth running and availability.

ABEL HM in action for

- Filter press feeding
- Sludge transfer
- Spray dryer feeding
- Incinerator feeding
- Metering

Used in many sectors:

- Ceramic industry
- Sewage works
- Mining industry
- Cement industry
- Electro plating industry
- Chemical/petrochemical industry
- Automobile industry

ABEL HMT



Capacity range:
 up to 400 m³/h; up to 25.0 MPa

The **ABEL HMT Hydraulic Membrane Pump** introduces the next generation of process pumps in the capacity range up to 25 MPa and for flow rates up to 400 m³/h.

Triplex Piston Membrane Pumps:
 The ABEL HMT is a single-acting, slow running and dry run protected Triplex Piston Membrane Pump.

Hydraulic Solids Transfer:
 For this purpose, ABEL HMT provides a perfect solution for the transfer of media with high TS content and specific weight.

ABEL HMT in action for

- Sludge transfer
- Backfilling
- Reactor feeding
- Process applications

Used in many sectors:

- Mining industry
- Chemical industry
- Petrochemical industry
- Off-shore industry

ABEL HP / SH / SM

Capacity ranges up to 275 m³/h; up to 25.0 MPa

ABEL HP



Capacity range:
up to 115 m³/h; up to 25.0 MPa

In high-pressure cleaning and process engineering **ABEL HP high-pressure pumps** prove successful in heavy-duty continuous operation.

Adapted to the pumping media:

- Clean liquids
- Abrasive media
- Shear-sensitive fluids

plate type, cone or ball valves are available

When intermittent operation is required, the pneumatic activated ABEL bypass valve ensures a trouble-free interruption of the flow. Hydraulically operated bypass valves may also be used.

Application areas of the ABEL HP e.g. cleaning of:

- Filter cloths
- Containers
- Apparatus
- Pipelines

Feeding/charging:

- Reverse osmosis plants
- Boilers
- Reactors
- Other apparatus

ABEL SH



Capacity range:
up to 103 m³/h; up to 16,0 MPa

ABEL SH Solids Pumps not only cover a wide capacity range, they are also suitable for a large number of pumping media and a vast variety of applications.

With the actual unit consisting of pump, drive and valve cylinders, the entire pump is made up of just 4 components:

The actual pump, the hydraulic drive unit, a screw conveyor to fill the product cylinders and a control cabinet with PLC (the "brain" of the system), which also provides for the integration into complex processes and control systems.

Application areas of the ABEL SH

- 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 cements

ABEL SM



Capacity range:
up to 275 m³/h; up to 10,0 MPa

Demands for higher flow rates in combination with higher operating pressures led to the development of the **ABEL SM spherical membrane pumps**. Within the scope of continuous product development over two decades the design has been adapted to the latest knowledge and requirements again and again.

ABEL SM spherical membrane pumps are duplex double-acting pumps convincing with high pump capacity, perfect function and extremely low operating and maintenance costs. The matured design guarantees high availability and operational reliability.

Application areas of the ABEL SM

- Sludge transfer
- Filter press feeding
- Water processing
- Mine dewatering
- Flue gas desulphurisation
- Ceramics industry

ABEL Service Concepts

Optimum, planable long-term safety

Commissioning, repair, maintenance

The innovative ABEL Pump Technology not only presupposes matured and highly developed technology, but also intelligent After-Sales solutions aiming at maintaining the serviceable life of the pumps in the long run with minimum efforts.

For this, ABEL provides you with fully developed service concepts, including comprehensive services for your positive displacement pumps.

The efficient combination of technical competency, know-how, quickest resource access and the unparalleled ABEL Customer Service offers you the optimum reliability that you need to operate your equipment



Original spare parts

24 hours service



- ▲ local repairs
- ▲ repairs in your plant
- ▲ preventive maintenance
- ▲ training of customer's personnel
- ▲ installation and conversion of equipment
- ▲ commissioning
- ▲ telephone diagnostics
- ▲ maintenance / maintenance contracts
- ▲ revision service

- ▲ original spare parts, quality tested acc. to ISO 9001
- ▲ reasonable kits of wear items
- ▲ understandable repair instructions
- ▲ advice by telephone
- ▲ reliable delivery with overnight service
- ▲ wear item offers for optimal storage
- ▲ parts exchange service for the complete product range
- ▲ "safety stock" facility for each individual spare parts combination

www.abel.de

Latest information at a glance

Specialisation creates Know-How

Latest information, product supplements and innovations, information on -trade show – everything concerning reciprocating positive displacement pumps can be found at www.abel.de.

Also in the net: Your ABEL sales engineers.

Through catchword search you obtain the desired information – e. g. which pump is ideal for which area of application or which capacity range. In any case, it is worth visiting abel.de regularly.





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High Pressure Pumps
Marine Pumps

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