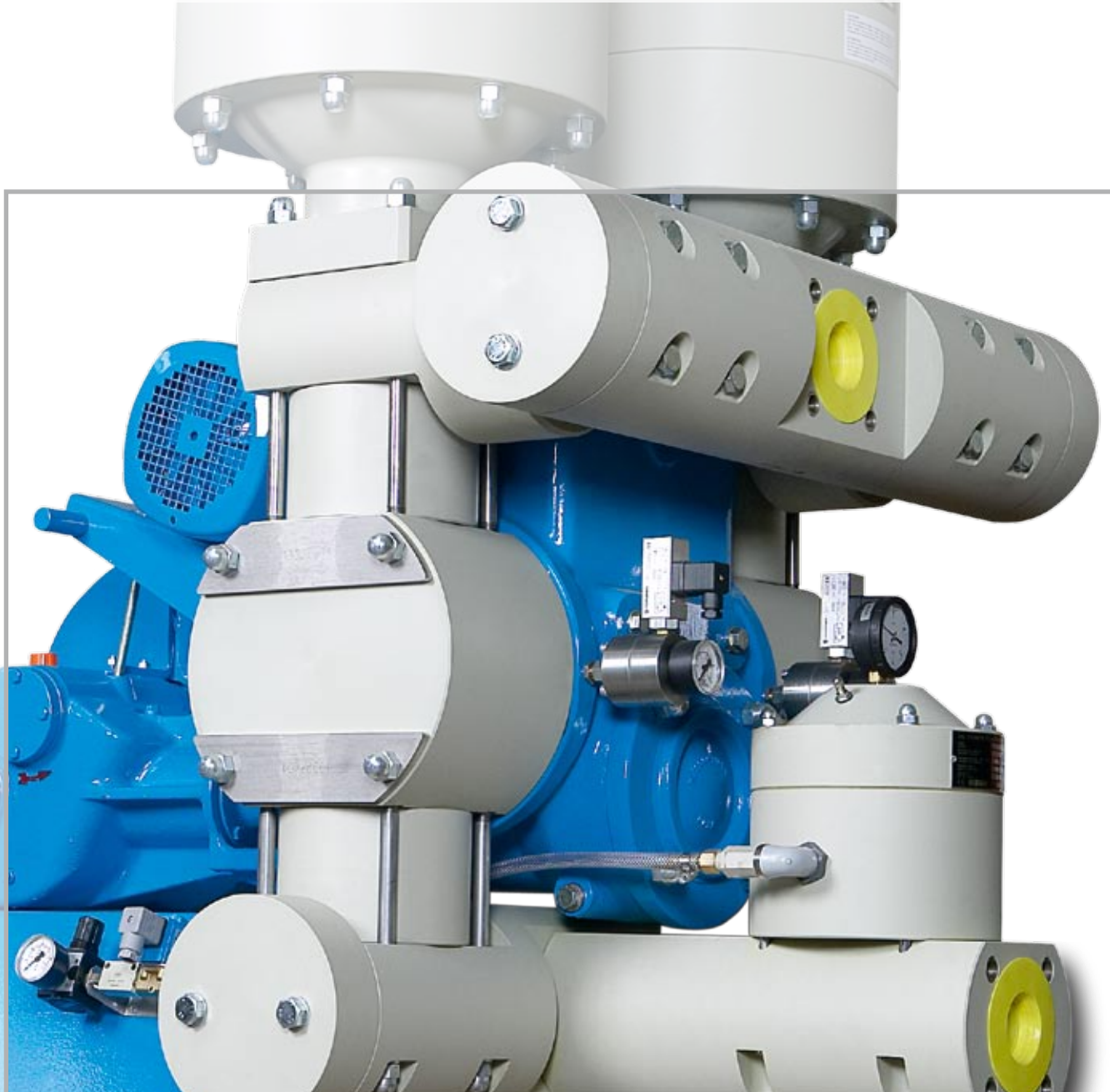




# Piston Diaphragm Pumps



**Economical**  
**Custom-designed**  
**Long-lived**

The right way to achieve best results in pumping slurries.

# The Company

## Tradition and Innovation

JOSEF EMMERICH PUMPENFABRIK GmbH was founded in Cologne in 1945 and is still an independent, medium-sized company, with head office in Hönningen-Liers.

Thanks to more than 50 years' experience, we are one of the leading specialists in the pumping of slurries in high-pressure applications. Piston diaphragm pumps are our business.

Our product development is characterized by innovation in the field of pump and materials technology and covers the complete production chain - from design and production, right through to marketing and sales.



## Infobox

### Our piston diaphragm pumps at a glance

- made for toughest industrial applications
- customized design and production
- low energy costs, low wear
- EMMERICH Multisafe double diaphragm
- high volumetric efficiency
- environmentally friendly
- round-the-clock service
- wearing parts available from stock
- long-life quality

### Delivery rates

- up to 120 m<sup>3</sup>/h (PPH version), up to 400 m<sup>3</sup>/h (steel version)

### Delivery pressure

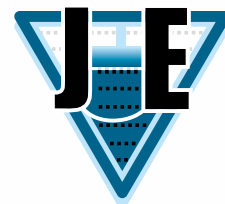
- 1.6 MPa (16 bars) as standard; higher pressures in accordance with customer specifications (up to 180 bars)

### Temperatures

- up to 80° C (PPH version), up to 100° C (steel version); higher temperatures possible on inquiry

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Anmeldung / Verwaltung ↑  
Lernparkplatz ←



# Characteristics

## Mode of operation

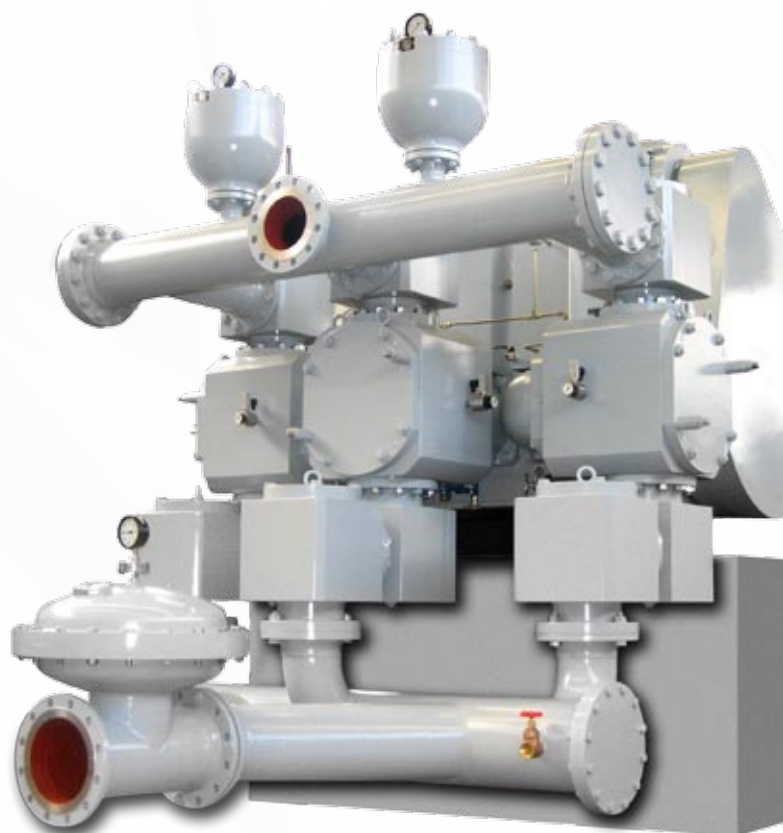
The energy is transmitted from the drive to a piston running in a bushing. The piston transmits the stroke movement via hydraulic or feed fluid to the diaphragm. During the suction stroke, the underpressure generated opens the suction valve, and the transport medium flows into the diaphragm casing. During the pressure stroke, the medium is forced through the discharge valve into the pressure pipe.

## Applications

- abrasive and highly viscous slurries with a high concentration of solids (e.g. flotation slurry, oxide slurry, coal slurry, metallic hydroxide slurries, kaolin and cement slurry, clay slurry, ceramic muck)
- ore slurries (e.g. copper-nickel slurry or bauxite suspensions)
- media used in the chemicals industry, such as pigment fluffs, latex, acids, lyes
- products in the food-processing and pharmaceuticals industries
- as process pumps and for hydraulic transport of solids in reactor charging
- for charging filters in the field of effluent treatment technology (local authority and industrial waste slurry)

## Cost efficiency

Designed for use under the toughest industrial conditions, our pumps can be found in operation throughout the world in a wide range of applications. Even pumps made in the founding years of our company are still in everyday use today. And spare parts can still be supplied even for the oldest pumps. High efficiency, low energy costs and low levels of wear ensure that our products quickly pay for themselves.



# Custom-Designed Production



## Made to match the pumping application

Individual projects in line with customer specifications: One of our special strengths is our flexibility. This means that as well as our standard product series, we are also able to offer a wide range of special solutions.

To ensure pumpability, we ask the customers to supply us with their suspension, which we then analyse in our own laboratory. This analysis forms the basis for the pump specifications, enabling our engineers to design a pump that is optimally suited for its purpose.

In the choice of pump casing materials, we have an extensive modular system available. Our pumps can be supplied in cast iron, cast steel, spheroidal graphite iron, various grades of special steel, ceramic, plastics, or with rubber lining.

For the hydraulic transport of solids through long pipelines, for example, soft-start regulation systems are provided, and in filter press operation, the pump takes care automatically of the necessary pressure / flow rate adjustment, so there is no need for a speed regulation device.



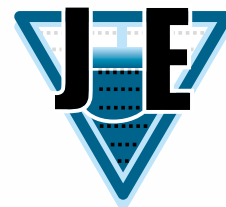
## Infobox

### Service

We offer our customers a wide range of services to ensure that our pumps maintain their performance and reliability over the complete product lifecycle.

A service engineer is usually available in Germany in less than 24 hours. And, by prior arrangement, service can also be provided at short notice throughout Europe and, indeed, anywhere in the whole world.

Our experienced experts are also available at any time to give advice by telephone on our Service-Hotline.



# Diaphragm

## The heart of every pump

Since 1975, JOSEF EMMERICH PUMPENFABRIK GmbH has had its own in-house production for the rubber parts and rubber-metal connections.

The benefits for our customers:

- small order quantities as needed
- customized special productions
- low cost
- experience and know-how
- prompt delivery

Products such as Multisafe diaphragms, diaphragms for diaphragm pulsation dampeners, valve seats, sealing rings, etc. are made from a wide variety of materials such as Perbunan (NBR), Neoprene (CR), Hypalon (CSM), Viton (FPM) and Vulkollan (AU).

The diaphragm provides the physical separation between the pump head and the actuator so that only the pump head actually comes into contact with the medium being pumped.

After production, the products are properly stored in conformity with ISO 2230 in a climate-controlled room, so are available for delivery at any time.

## Infobox

### EMMERICH Multisafe Double Diaphragm

Safe and environmentally friendly: All piston diaphragm pumps are equipped with Multisafe diaphragms. This diaphragm is an Emmerich development and consists of two diaphragm halves cemented at the edge.

In the event of failure of one of the diaphragm halves, a measuring device which is connected to the space in-between is exposed to the working pressure applied. This therefore means that the diaphragm can be replaced in good time before the technical system or the product is exposed to risk.

Diaphragm rupture can be indicated both visually and by an electric signal.



# Design and Development

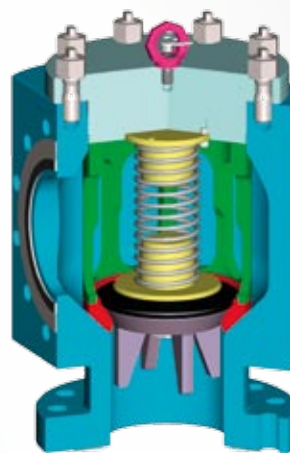


## Experience and Innovation

In the present day, the time from development to production is becoming shorter and shorter. To be able to adapt quickly to technical innovations and time requirements, we work with the aid of state-of-the-art CAD and 3D CAD systems. Our design engineers can draw on a wealth of sound knowledge built through many years of experience. New developments - from the virtual 3D model to the finished product - are undertaken with the courage and conviction of the need for innovation.

Design is done on a project-oriented basis, ensuring rapid realization even in the case of customized solutions.

Our pumps often form the heart of complete technical digestion process systems: CAD/3D- aided design, modern production methods, electronic test floors and certification to DIN ISO 9001 are guarantees of highest quality.



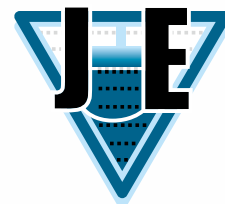
Conical Valves



## Infobox

### Pumps with Polypropylene Heads

In 1995, JOSEF EMMERICH PUMPENFABRIK GmbH was the first company to develop a pump with a pump head made of polypropylene and designed for handling large volume flows, operating pressures up to 16 bar and temperatures up to 80°C.



# Quality Assurance

## Guaranteed Performance

We offer our customers safety and reliability.

All the pumps produced by us are tested on a processor-controlled test floor.

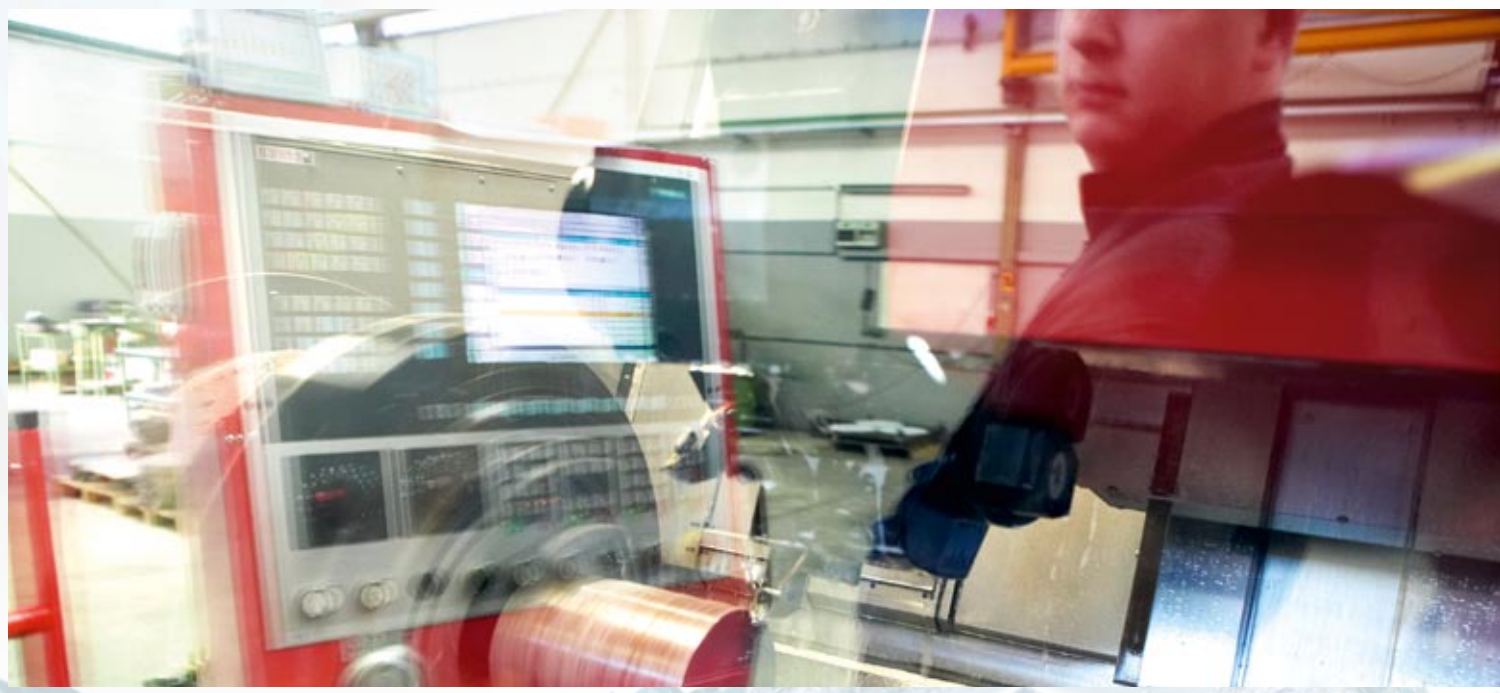
As a certified company, JOSEF EMMERICH PUMPENFABRIK GmbH assures the quality of its products in conformity with DIN EN ISO 9001 : 2008.

This high standard is maintained and assured through constant further training of our personnel as well as continuous quality testing at each individual workplace.

### Infobox

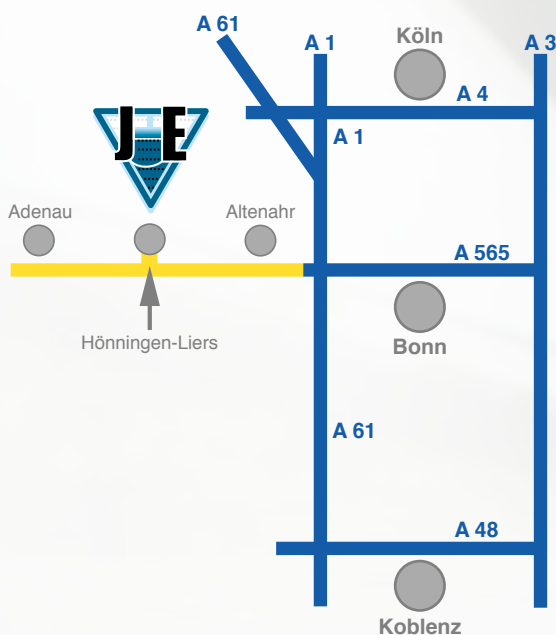
#### Certificates

- EN ISO 9001 : 2008
- AD 2000 HP 0
- EN ISO 3834-3
- 94/9/EG (ATEX)



# JOSEF EMMERICH PUMPENFABRIK GMBH

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