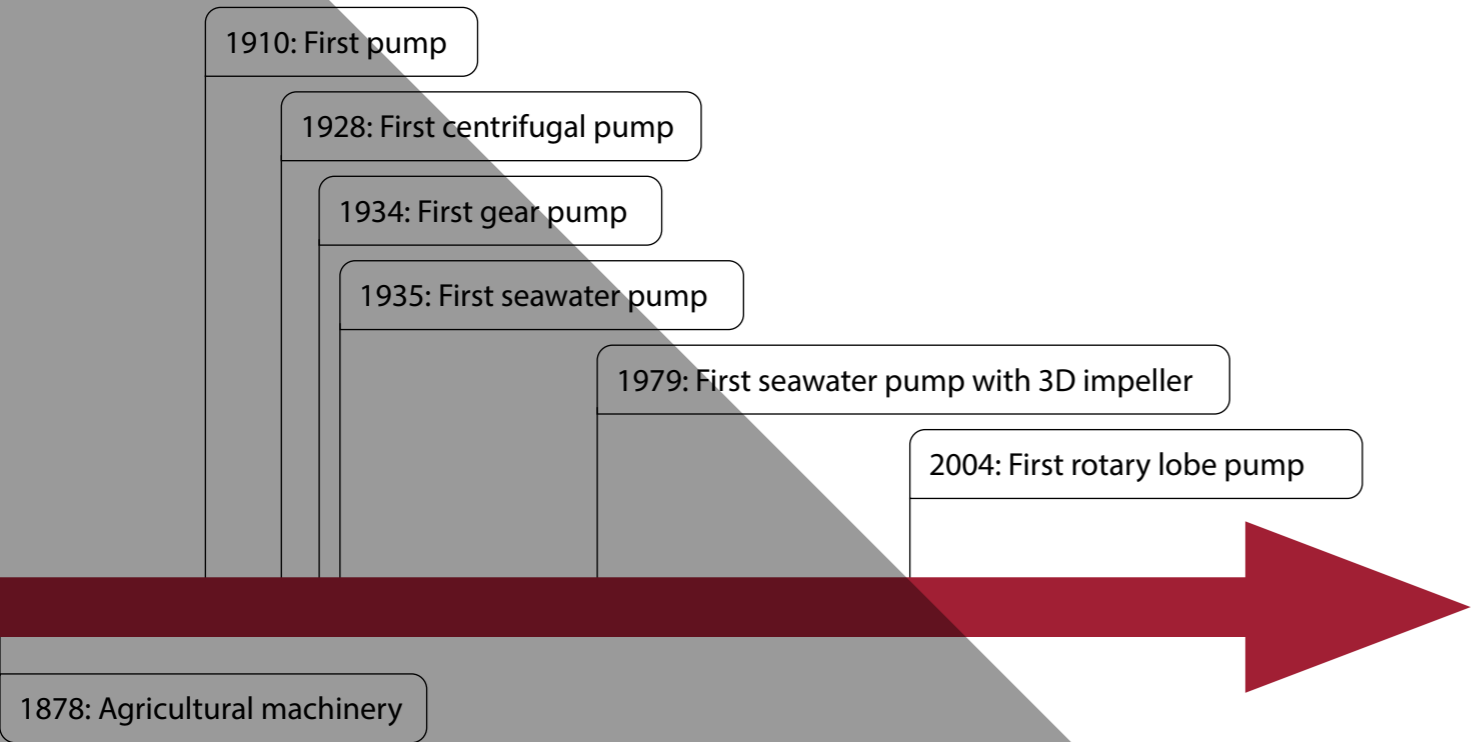




# Pump Technology

- ◆ Centrifugal pumps
  - ◆ Gear pumps
  - ◆ Rotary lobe pumps





## Tradition

Since 1878, Steimel has been developing and producing pumps and machinery in Hennef and continued the fine tradition of family-owned business.

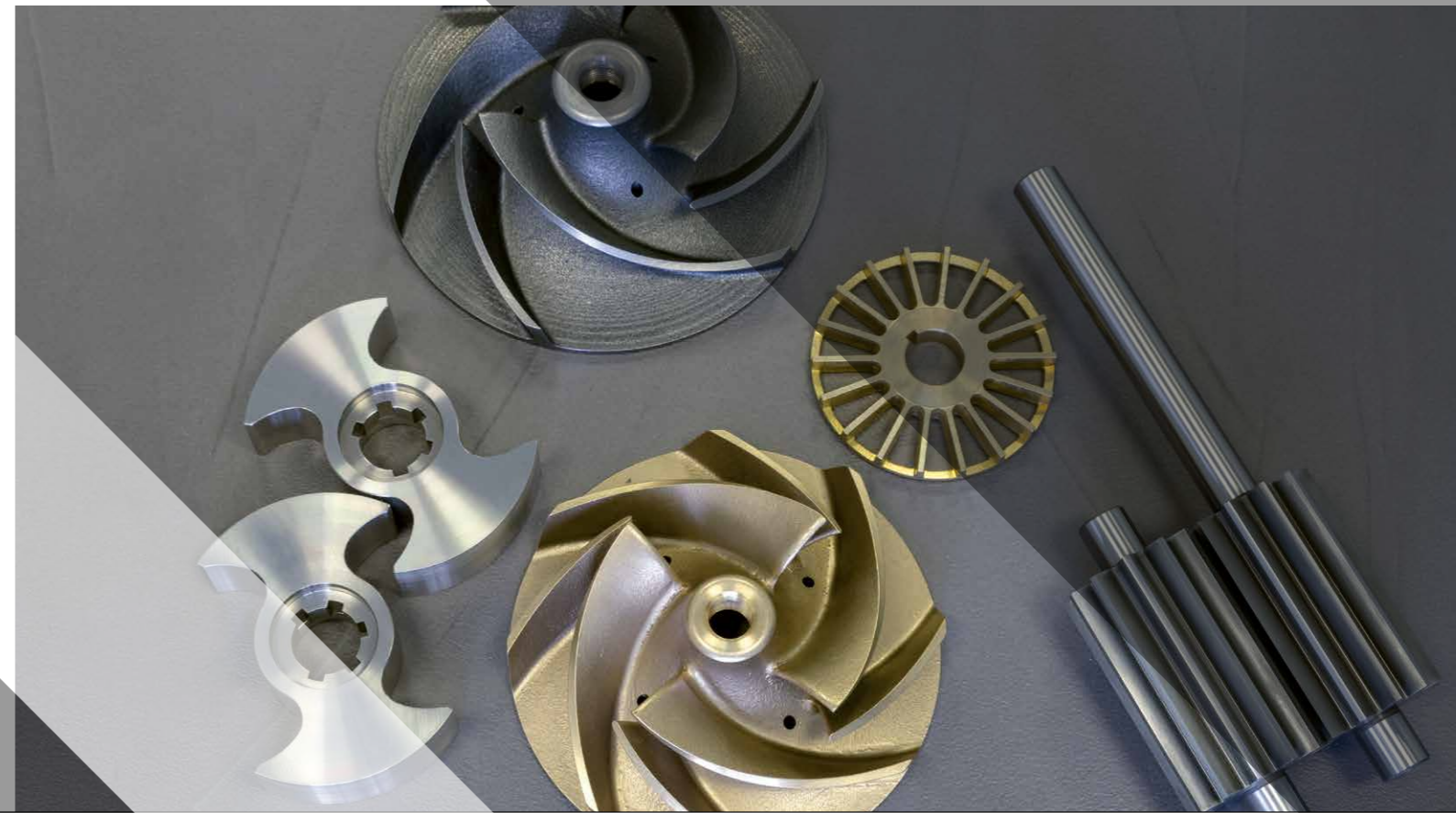
In those early years of rapid industrial expansion in Germany, our first centrifuges were developed for use as milk centrifuges and our first pumps for agricultural use.

Since then, carrying forward its tradition, Gebr. Steimel has become a technologically sophisticated leading manufacturer of pumps, centrifuges and industrial systems.

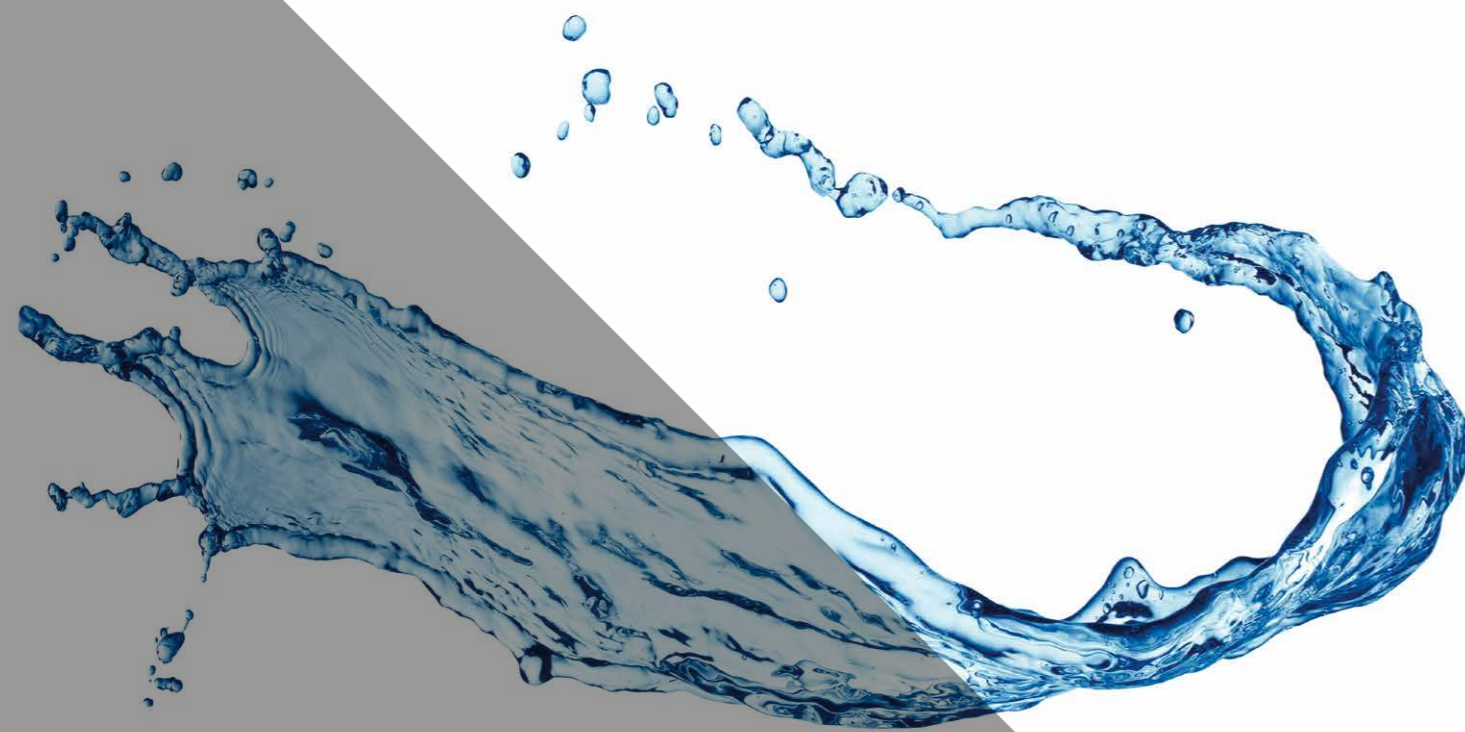
## Today

Gebr. Steimel is a reliable partner of renowned international customers in the industry.

- ◆ Centrifugal pumps
- ◆ Gear pumps
- ◆ Rotary lobe pumps

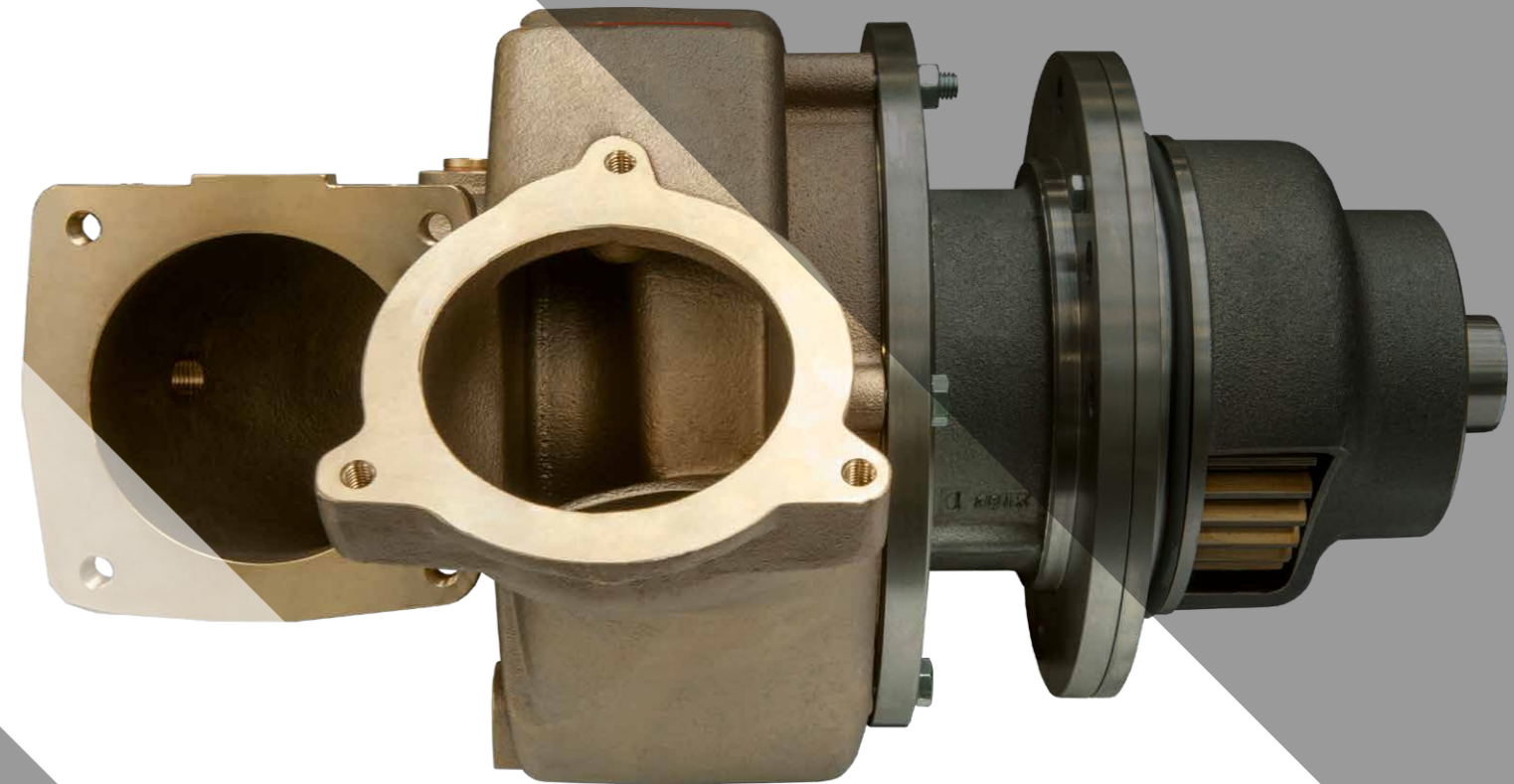


- ◆ Project planning
- ◆ Development and engineering
- ◆ Customized design
- ◆ Small and medium scale production
- ◆ Service



Seawater

- ◆ Centrifugal pump or side-channel pump models
- ◆ Flow rate up to 350 m<sup>3</sup> / h
- ◆ Pressure rise: max. 5 bar
- ◆ Temperature range: 0 to 35 °C
- ◆ Self-priming possible depending on model
- ◆ Material design:
  - Drive shaft: Stainless steel
  - Impeller and housing: Seawater-resistant bronze
  - Bearing housing: Grey cast iron




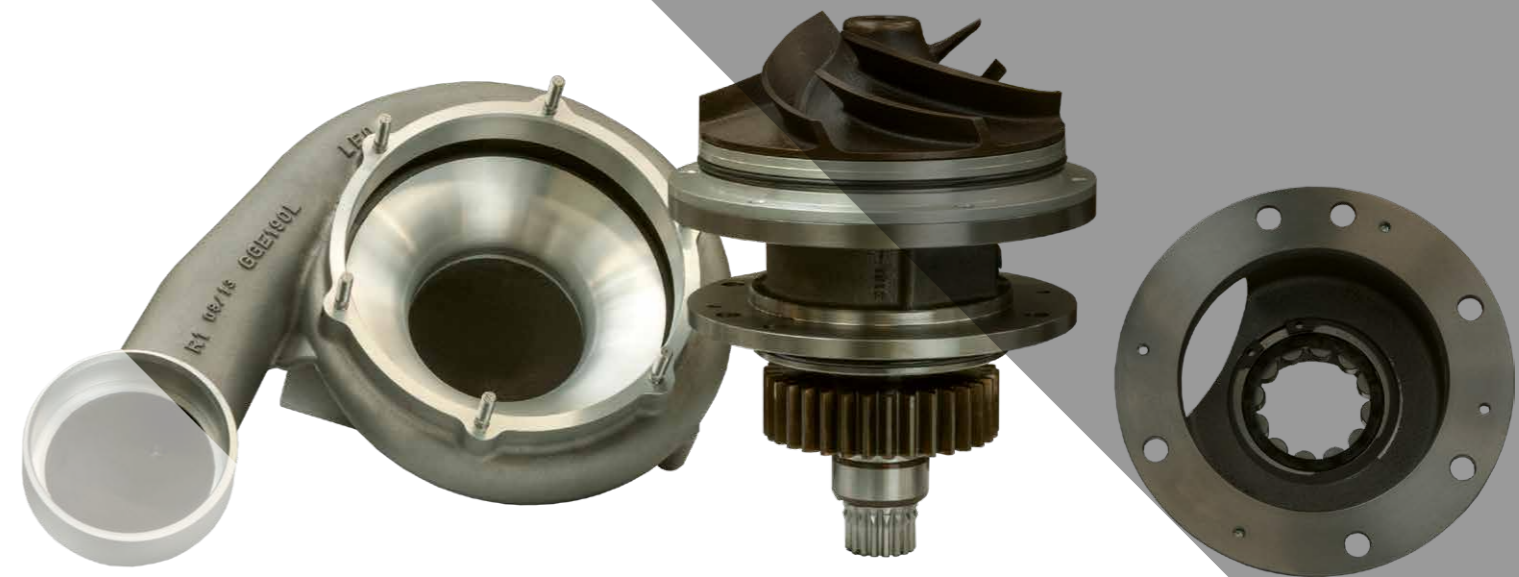
Steimel seawater pumps are used for cooling via heat exchanger of high and medium-speed diesel and gas engines. The gear driven pump is flange-mounted to the engine's gear box. Belt driven pump is available as an alternative. Self-priming function is featured in certain models.





## Cooling water

- ◆ Centrifugal pump model
- ◆ Flow rate up to 350 m<sup>3</sup> / h
- ◆ Pressure rise: max. 5 bar
- ◆ Temperature range: -10 to + 105 °C
- ◆ Material design:
  - Drive shaft: Q&T steel
  - Impeller: Grey cast iron
  - Housing: Grey cast iron, cast aluminium
  - Bearing housing: Grey cast iron



Steimel cooling water pumps are used in the cooling circuits of high and medium-speed diesel and gas engines. Design and engineering is carried out according to the specifications of the engine manufacturer and is specially designed according to the requirements of the cooling system and the installation situation. Different variants of pumps for high and low temperature circuits can be driven separately or together.

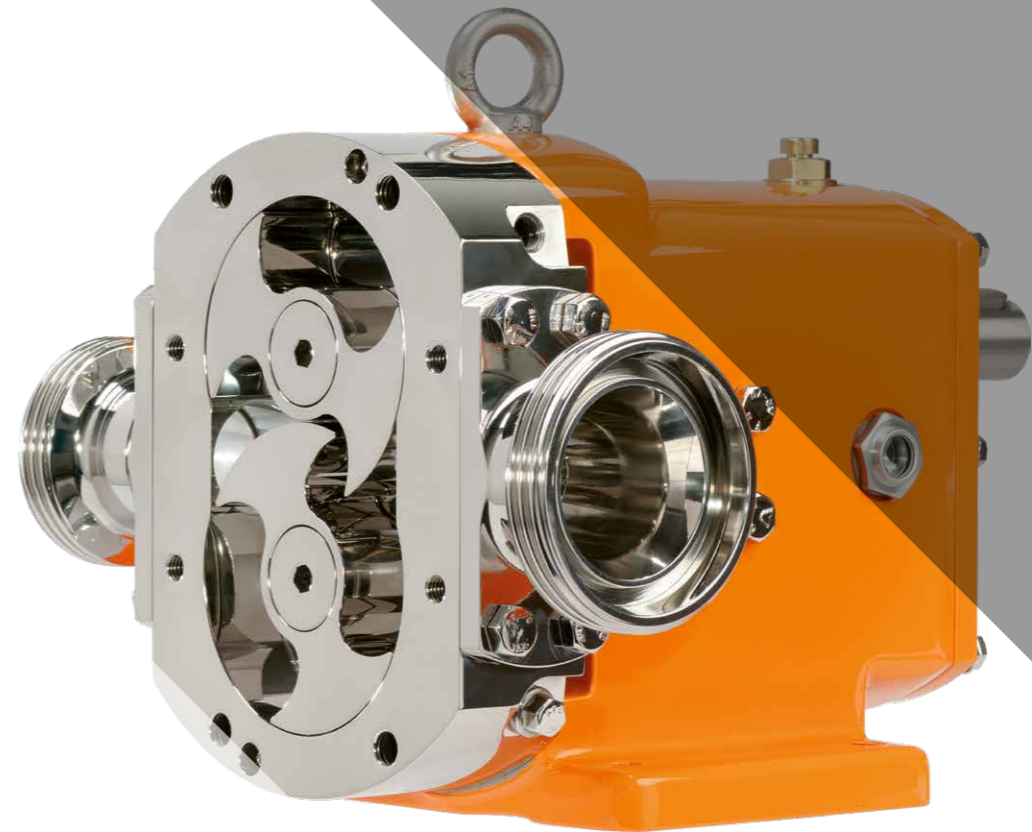
# Paints and varnishes



## Gear pump or rotary lobe pump

Operating parameters depending on model and application:

- ◆ Flow rate: max. 3,400 cm<sup>3</sup> / rev
- ◆ Maximum pressure: 25 bar
- ◆ Operating temperature: max. 200 °C
- ◆ Viscosity range: max. 100,000 mm<sup>2</sup> / s
- ◆ Optional with pressure relief valve
- ◆ ATEX design as optional feature
- ◆ Material design:
  - Rotors: Case hardening steel or stainless steel
  - Housing parts: Grey cast iron or stainless steel



- |                         |                        |
|-------------------------|------------------------|
| Adhesives               | Polyols                |
| Alkyd resins            | Printing inks          |
| Binders                 | Resins                 |
| Epoxy resins            | Softeners              |
| Glazes                  | Synthetic resin paints |
| Insulating varnishes    | Synthetic resin glues  |
| Nitrocellulose lacquers | Varnish                |
| Oil gloss paints        | Waxes                  |
| Paints                  |                        |
| Paint solvents          |                        |
| Paste                   |                        |

Steimel pumps for paints and varnishes are used in machines and plants for the production of pasty and liquid printing inks.

Steimel pumps are used in agitator bread mills for wet milling of suspensions.

By using the rotary lobe pump, gentle material handling of products with high solids content or pigments can be achieved.

The pumps are also suitable as process pumps for processing solvent-based media and adhesives.

# Bitumen



## Gear pump or rotary lobe pump

Operating parameters depending on model and application:

- ◆ Flow rate: max. 3,400 cm<sup>3</sup> / rev
- ◆ Maximum pressure: 8 bar
- ◆ Operating temperature: max. 250 °C
- ◆ Viscosity range: max. 10,000 mm<sup>2</sup> / s
- ◆ Electric or thermal oil heating
- ◆ Optional with pressure relief valve
- ◆ Material design:
  - Rotors: Case hardening steel
  - Housing parts: Grey cast iron

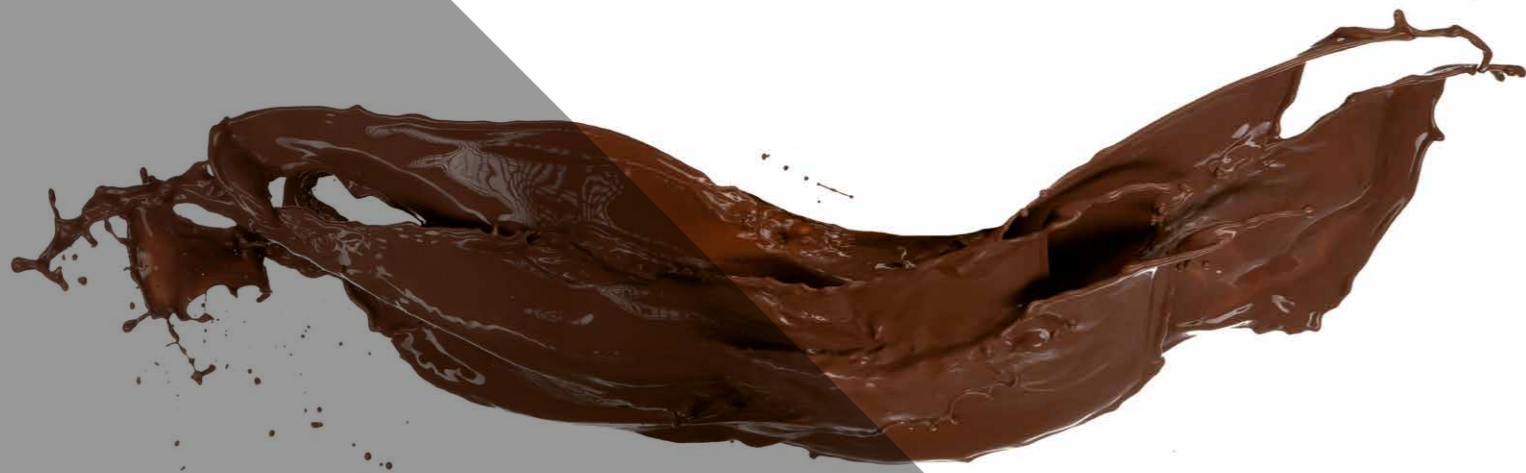


Steimel bitumen pumps are used in stationary and mobile asphalt mixing plants for continuous or batch production of asphalt.

By changing the direction of rotation, the pumps can also be used for filling and draining bitumen tanks.

Steimel bitumen pumps which are installed on special vehicles are applied for repairing the cracks in asphalt. Special Steimel pumps are available for processing abrasive polymer and recycled bitumen.

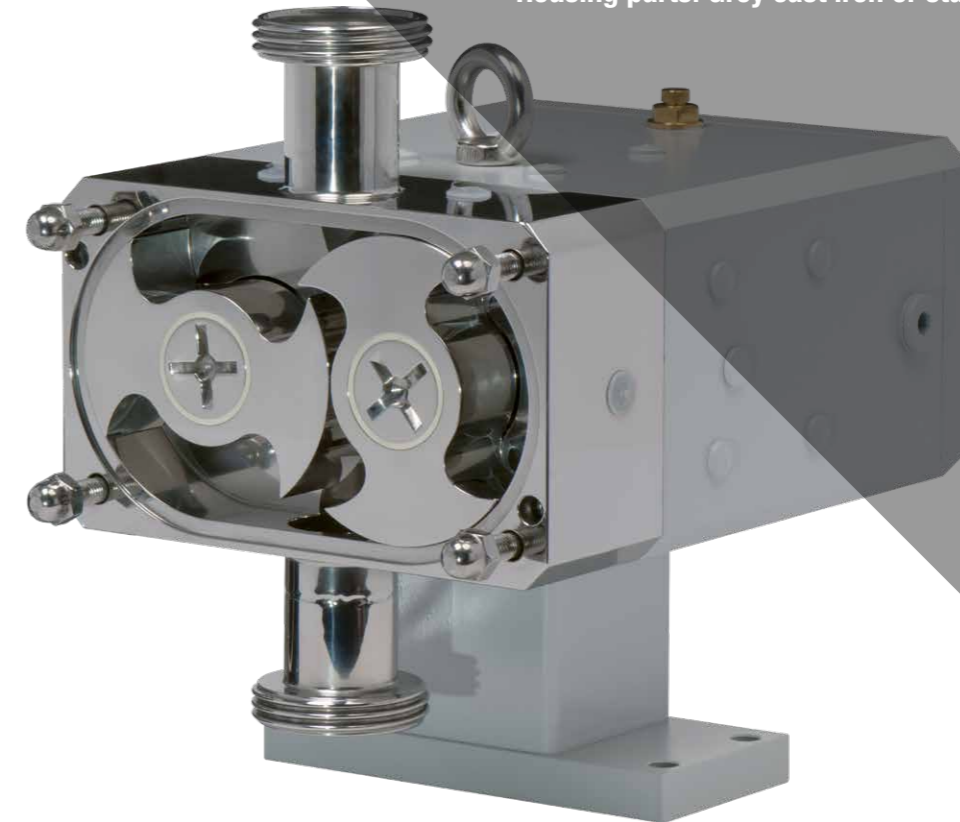
# Chocolate



## Gear pump or rotary lobe pump

Operating parameters depending on model and application:

- ◆ Flow rate: max. 3,400 cm<sup>3</sup> / rev
- ◆ Maximum pressure: 20 bar
- ◆ Operating temperature: max. 200 °C
- ◆ Viscosity range: max. 100,000 mm<sup>2</sup> / s
- ◆ Heatable
- ◆ Optional with pressure relief valve
- ◆ CIP / SIP capability possible depending on model
- ◆ Material design:
  - Rotors: Case hardening steel or stainless steel
  - Housing parts: Grey cast iron or stainless steel

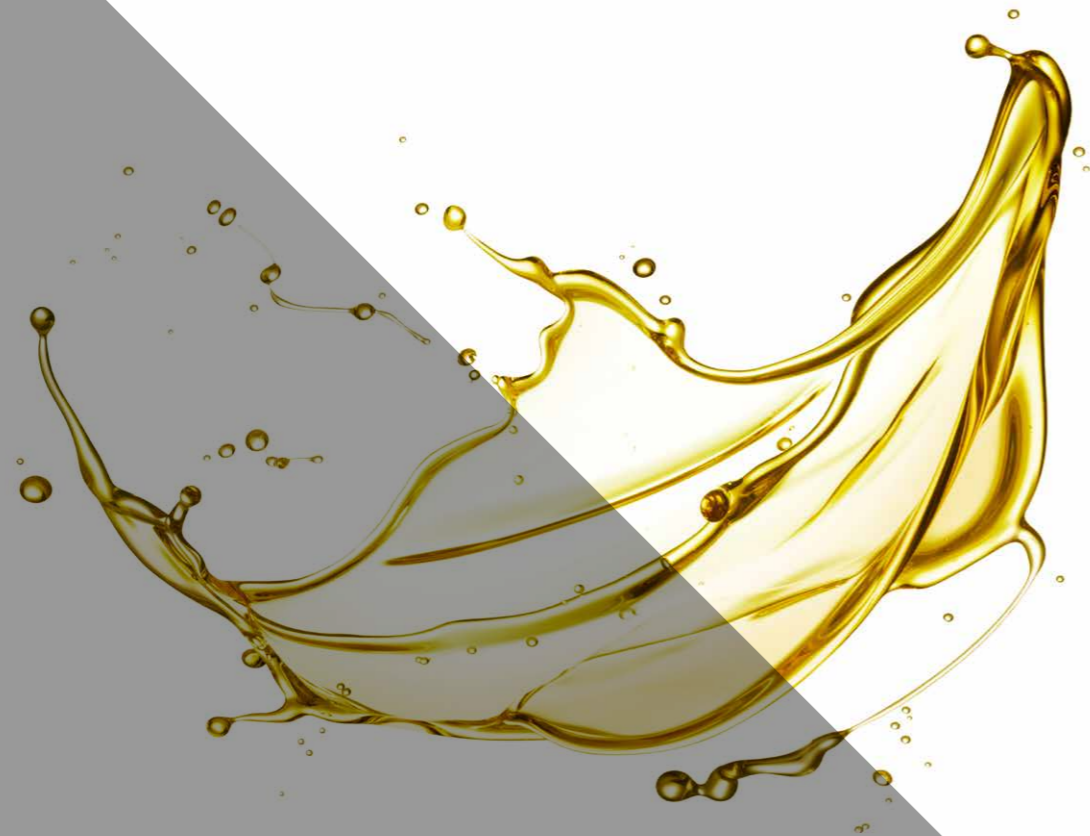


- |                   |                |                |
|-------------------|----------------|----------------|
| Bread dough       | Hazelnut paste | Raw cocoa      |
| Chocolate coating | Honey          | Soya oil       |
| Chocolate mixture | Toffee paste   | Sour dough     |
| Cocoa butter      | Liquorice mass | Sugar solution |
| Cocoa mass        | Mashing        | Syrup          |
| Cooked sugar      | Molasses       | Waffle dough   |
| Cooking oil       | Mustard        |                |
| Fats              | Nougat         |                |
| Fat glazes        | Palm oil       |                |
| Flavours          | Pastes         |                |
| Fruit mash        | Peanut paste   |                |
| Gelatine          | Peanut butter  |                |
| Glucose           | Rapeseed oil   |                |

Steimel chocolate pumps are used in machinery and equipment for the processing and production of chocolate. Installation in stationary and mobile tank systems or storage and melting containers for chocolate is possible.

By using the rotary lobe pump, gentle material handling of products containing fruit or grain can be achieved.

Steimel pumps are installed in production lines as process pumps for the production of cosmetic creams, oils and lotions.

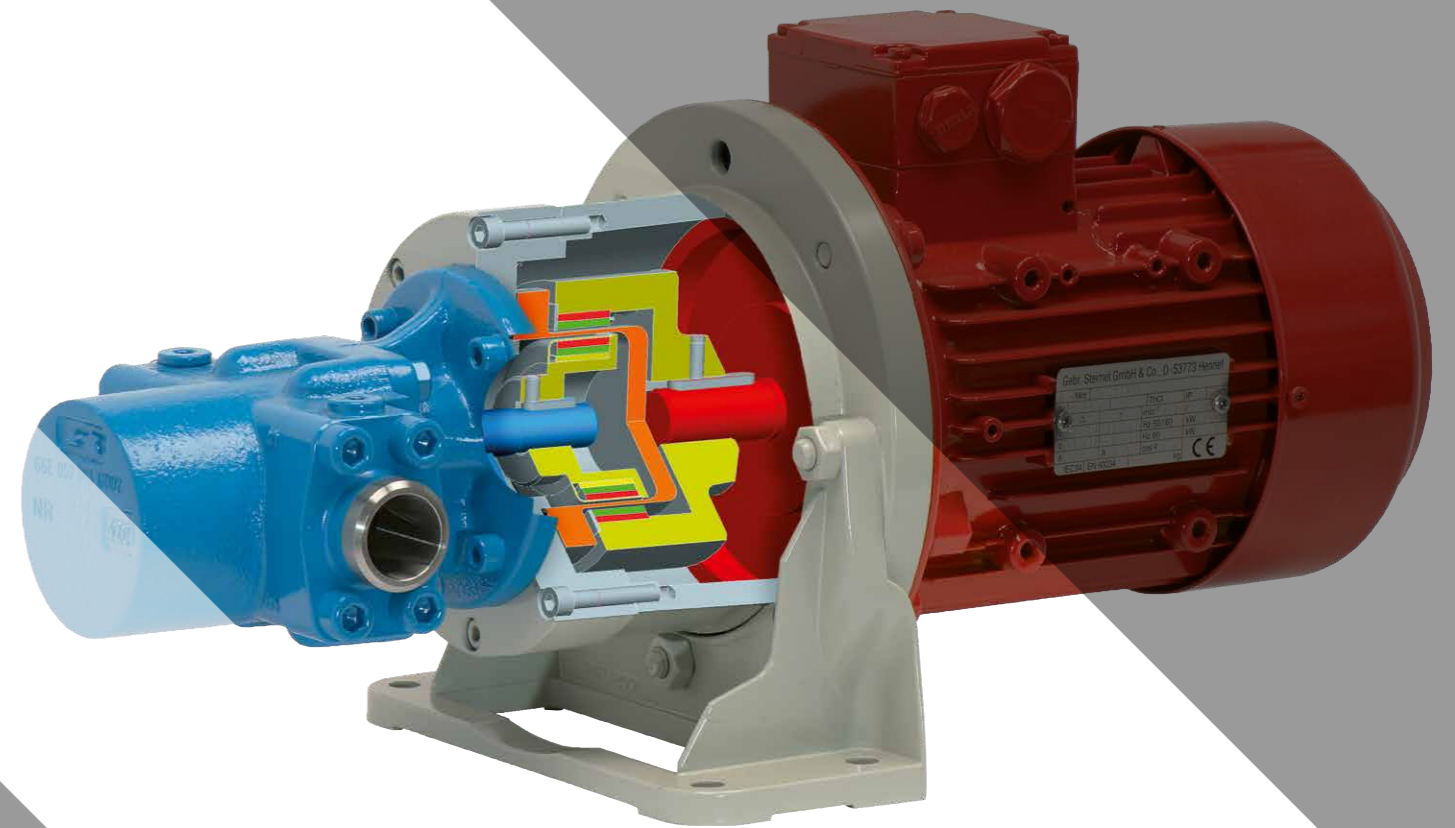


# Lubricating oil

## Gear pump or rotary lobe pump

Operating parameters depending on model and application:

- ◆ Flow rate: max. 3,400 cm<sup>3</sup> / rev
- ◆ Maximum pressure: 25 bar
- ◆ Operating temperature: max. 250 °C
- ◆ Viscosity range: max. 100,000 mm<sup>2</sup> / s
- ◆ Optional with pressure relief valve
- ◆ ATEX design as optional feature
- ◆ Material design:
  - Rotors: Case hardening steel or stainless steel
  - Housing parts: Grey cast iron or stainless steel



- |                        |                  |
|------------------------|------------------|
| Bunker oil             | Mineral oils     |
| Crude oil, solids-free | Palm oil         |
| Diesel fuel            | Paraffins        |
| Drawing oils           | Paraffin oil     |
| Fatty acids            | Rape oil         |
| Glycol                 | Silicone oils    |
| Greases                | Soap solution    |
| Hardening oils         | Thermal oils     |
| Heavy fuels            | Transmission oil |
| Hydraulic oils         | Turbine oils     |
| Isocyanates            | Waxes            |
| Linseed oil            |                  |
| Lubricating oils       |                  |

Steimel lubricating oil pumps are suitable for use in oil supply equipment for large gears, industrial plants and heavy machinery. Depending on the application, various requirements for the sealing technology and the environmental conditions can be met. The pump can be delivered as single pump or as a complete unit with clutch, gearbox and electric motor.





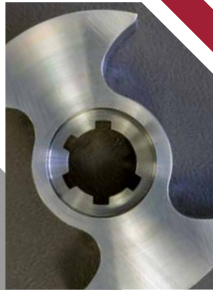
## Pumps worldwide



Impeller



Impeller



Rotary lobe



Gear

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