

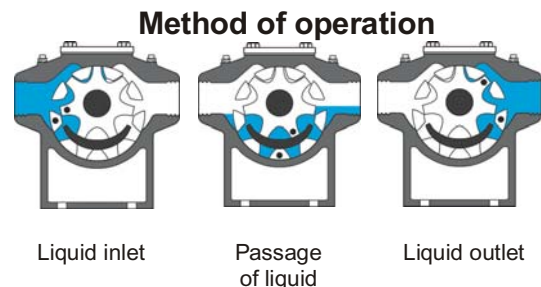
**DESMI ROTAN<sup>®</sup>, one of the world's leading manufacturers of internal gear pumps.**

The internal gear pump principle was developed in 1915 by a Danish American.

In 1921, he licensed a Danish company to manufacture the pumps, which have been continuously marketed worldwide under the ROTAN<sup>®</sup> name. The unique, modular concept of ROTAN<sup>®</sup> pumps is generally recognized as the most advanced internal gear pump design available today.

The ROTAN<sup>®</sup> internal gear pump provides favourable flow conditions, as the direction of the liquid flow is only changed slightly through the pump.

This means that superior self-priming capability and gentle liquid handling are achieved, and also that highly viscous liquids can be pumped.



- ROTAN<sup>®</sup> pumps offer the following additional advantages:
- Pumping in either direction
- Easy maintenance and inspection based on the modular design
- Sturdy and uncomplicated construction with only two rotating parts and one shaft seal
- Comprehensive choice of configurations available as standard
- Genuine back pull-out design
- End clearance axial adjustment

All ROTAN<sup>®</sup> pumps are hydrostatically and performance tested and receive their own certificate before leaving the factory.

ROTAN<sup>®</sup> pumps can be supplied in accordance with the ATEX Directive, for use in potentially explosive environments. The ROTAN<sup>®</sup> pumps are certified by Physikalisch-Technische Bundesanstalt PTB, Postfach 33 45, 38023 Braunschweig, registration number 03 ATEX D052.

It is DESMI's policy to offer customized solutions developed in co-operation with worldwide leading companies and to follow-up by first class after-sales service.

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### **GP ROTAN® "General Purpose" pumps:**

Pumps in cast iron, for clean, non-abrasive liquids.  
The simple and compact construction makes it a low-cost pump, often used in modified versions by OEM customers.

A close-coupled OEM model is also available (see picture below).  
GP pumps are designed for use with IEC or NEMA flange motors.

Available with 90° angular configuration.

#### Typical Applications:

Pumping of:

- Clean oil
- Glycol
- Vegetable oil
- Solvents
- Lube oil
- Waste oil
- Fish oil

Capacity Range:	Up to 50 m <sup>3</sup> /h
Speed:	Up to 1750 rpm
Differential Pressure:	Up to 16 bar
Suction Lift:	Up to 0.5 bar vacuum while priming Up to 0.8 bar vacuum while pumping
Viscosity Range:	Up to 7500 cSt
Temperature:	Up to 150°C

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### **HD ROTAN® "Heavy Duty" pumps:**

Pumps in cast iron, for a wide range of viscous, non-corrosive liquids.  
HD pumps are specifically designed for difficult applications and those involving high viscosity liquids.

HD pumps are known by their sturdy and simple construction.

Available with 90° angular configuration.

#### Typical Applications:

Pumping of:

- Oil
- Asphalt
- Chocolate
- Paint

- Lacquer
- Molasses
- Soap
- Other industrial viscous liquids
- Additives
- Polyol
- Viscose
- Sulphate soap
- Maltose
- Grease
- Pitch
- Base oil
- Bitumen
- Polyester

Capacity Range:	Up to 170 m <sup>3</sup> /h
Speed:	Up to 1750 rpm
Differential Pressure:	Up to 16 bar
Suction Lift:	Up to 0.5 bar vacuum while priming Up to 0.8 bar vacuum while pumping
Viscosity Range:	Up to 250,000 cSt
Temperature:	Up to 250°C

### **PD ROTAN<sup>®</sup> “Petrochemical Duty” pumps**

PD pumps are designed for refinery and petrochemical applications, all pressure-containing components are carbon steel. Design pressure according to ANSI 300 Lbs or Pn40.

PD pumps are available to meet API 676 standards with exceptions.

Available with 90° angular configuration.

Typical Applications:

Pumping of:

- Fuel
- Oil
- Gasoline
- Lube oil
- Grease
- Other hydrocarbon based fluids
- Additives
- Bitumen
- Polystyrene
- Wax

Capacity Range:	Up to 170 m <sup>3</sup> /h
Speed:	Up to 1750 rpm
Differential Pressure:	Up to 16 bar
Suction Lift:	Up to 0.5 bar vacuum while priming Up to 0.8 bar vacuum while pumping
Viscosity Range:	Up to 250,000 cSt
Temperature:	Up to 250°C

### **CD ROTAN<sup>®</sup> “Chemical Duty” pumps**

Pumps in stainless steel, designed to handle corrosive liquids.

CD pumps are designed for handling corrosive liquids, primarily found in the chemical processing, food and pharmaceutical industries.

Available with 90° angular configuration.

Typical Applications:

Pumping of:

- Organic acid
- Fatty acid
- Alkali
- Caustic soda
- Polymer solutions
- Soap
- Shampoo
- Animal fat
- Vegetable fat
- Chocolate
- Other special fluids
- Resin
- Paint
- Rosin

Capacity Range:	Up to 170 m <sup>3</sup> /h
Speed:	Up to 1750 rpm
Differential Pressure:	Up to 16 bar
Suction Lift:	Up to 0.5 bar vacuum while priming Up to 0.8 bar vacuum while pumping
Viscosity Range:	Up to 250,000 cSt
Temperature:	Up to 250°C

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## ED ROTAN® “Environmental Duty” pumps

Magnetically coupled pumps for ultimate protection against leakage.

As only minimal maintenance is necessary, ED pumps will be a very economical solution compared with traditionally sealed pumps, especially where the application requires the use of double mechanical shaft seals. Often these applications are very arduous resulting in the seals and support system requiring regular attention and/or replacement. Thus, the life cycle costs for ED pumps are generally much lower than for pumps using two seals.

Available with 90° angular configuration.

Typical Applications:

Where no leakage, liquid or gaseous, is allowed.

Pumping of:

- Isocyanate
- Solvents
- Hazardous organic liquids
- Printing ink
- Resin
- Pitch

Materials:	Cast iron, carbon steel or stainless steel
Capacity Range:	Up to 90 m <sup>3</sup> /h
Speed:	Up to 1750 rpm
Differential Pressure:	Up to 16 bar
Suction Lift:	Up to 0.5 bar vacuum while priming Up to 0.8 bar vacuum while pumping
Viscosity Range:	Up to 10,000 cSt
Temperature:	Up to 250°C

- Alkyd resin
  - Soyabean oil
  - Linseed oil
  - Monomers
  - Polyol
  - Corn syrup
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## ROTAN®

- Dynamic axial balancing system, minimizing axial loads, saving energy and increasing life (see picture below).
- Patented cooling system, based on an integral pump, eliminating the need for external cooling (see picture below).
- Maximum protection against leakage by increased safety, provided by a completely enclosed magnetic coupling housing.
- Optimal for outdoor installation, the completely enclosed magnetic coupling housing protects the external magnets from contact with the surrounding atmosphere.
- Large choice of slide bearing materials available as standard, e.g. cast iron, bronze, carbon and tungsten carbide
- Standard magnet material is neodymium-iron-boron. Optional samarium cobalt permanent magnets permit operating temperatures up to 250°C Pumping in either direction.
- External heating jackets for both front cover and magnetic coupling housing available as standard optional features
- Genuine back-pullout design
- Standard as close-coupled, optional with bare shaft end
- Both internal and external canister protection

## Benefits:

- Long life time
- No leakage
- Environmental safety
- Lower operating costs
- Easy servicing

