

**Positive Displacement Rotary Pump  
MOG 3000**



**Application**

The pump is designed to pump both low and high viscosity products — in the food industry as well as in other industries. It is particularly suitable for pumping viscous products and products containing solids.

**Working principle**

MOG 3000 is a self-priming, positive displacement rotary pump with two 3-lobe rotors. The volume at the inlet increases when the rotors revolve and the product is drawn into the pump. It is then transported in the space between the lobes along the periphery of the pump casing and is forced out through the outlet when the volume between the lobes is reduced. The rotors operate without contact with the casing or with each other. They are driven by helical timing gears in a gear housing with an oil bath. The pump casing and gear housing are separated — no risk for oil mixing with product. The pump can be cleaned-in-place — CIP. Max. temperature for the standard version is 70 °C. Rotors for higher temperatures are available.

**Standard design**

**Material**

All parts in contact with the product are made of acid-proof steel, AISI 316. Gaskets of oil resistant nitrile rubber. Gear housing of cast, Centriblue laquered aluminium.

**Shaft seal**

Mechanical seal with stationary seal ring of acid-proof steel and rotating seal ring of carbon.

**Connections**

SMS male connections:

Version	
3040	101.6 mm SMS male
3160	6" BSP

**Drive unit**

The standard pump has no drive unit. It can be delivered with drive units as described under "Optional extras", m.

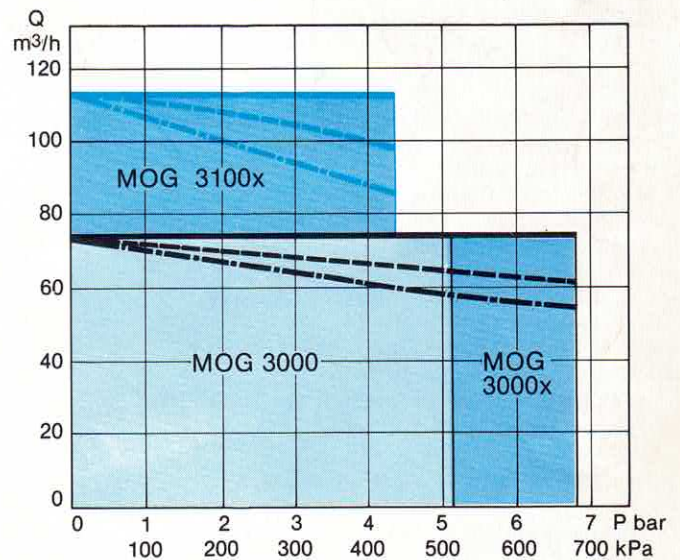
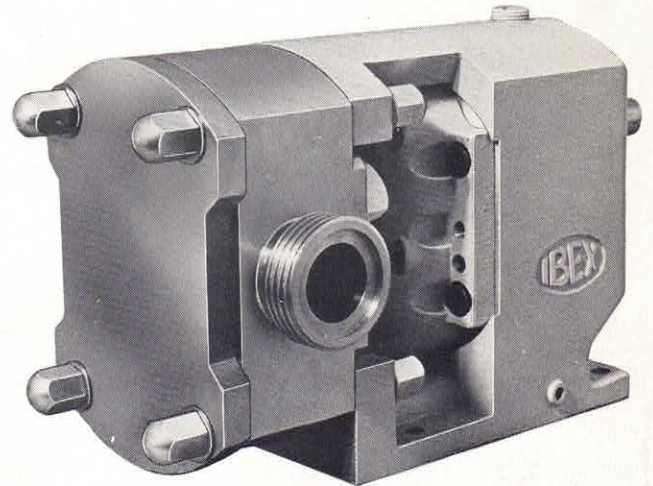


Fig. 2. Capacity diagrams — High viscosity, 3000–5000 cSt  
 --- Medium viscosity, 50–75 cSt  
 -.-.- Low viscosity, water

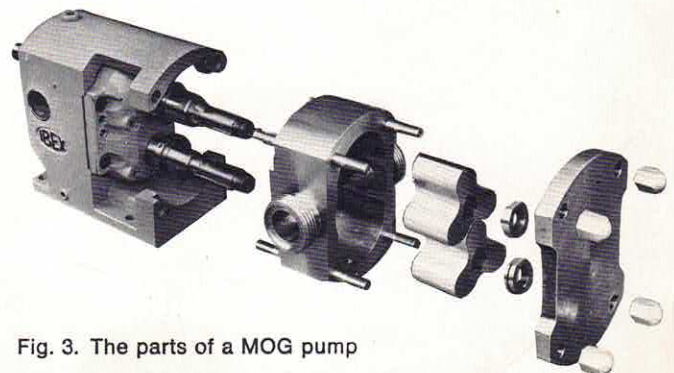


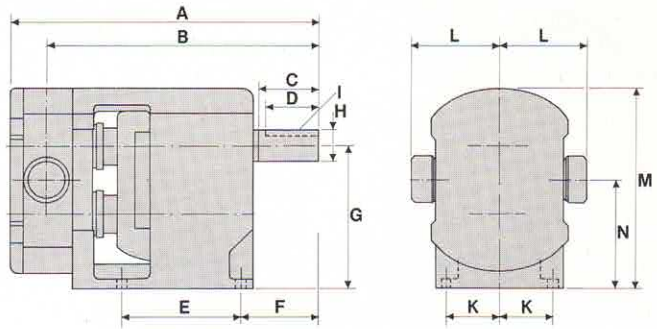
Fig. 3. The parts of a MOG pump

# Positive Displacement Rotary Pump, MOG 3000

## Optional extras

- a) 2-bladed rotors for products which contain solids.
- b) Acid-proof rotors for temperatures up to 95 °C or for max. temperature 150 °C.
- c) Double shaft seal for seal flushing with water or steam.
- d) Packed gland seal.
- e) Double O-ring seal.
- f) Gaskets of viton.
- g) ISO clamps, flanges or male connctions according to standards other than SMS. (DIN, BS, ISO/IDF/ISS etc.)
- h) Fixed relief valve in the pump casing cover.
- i) Adjustable relief valve in the pump casing cover.
- k) Heating and cooling jacket for the pump casing cover. Cannot be combined with h) and i).
- l) Support bearings for the rotor shafts. Used for high pressures (not hygienic). Marked with X after the name (e.g. MOG 3040X). See diagram.
- m) Drive unit consisting of base plate, flexible coupling, coupling guard and
  - 1. Direct coupled geared motor.
  - 2. Variable speed drive with motor.
 Voltage and frequency according to requirements.

## Dimensions



All dimensions in mm.

Version		
3000	3100	
A 584	660	G 240
B 532	559	H 50 K6
C 110		I 16 x 6
D 70		K 100
E 244		L 170
F 140		M 345
		N 178

## Selection of pump size

The selection of the size of a positive displacement pump depends to a great extent on the viscosity of the product to be pumped and its shear sensitivity. The diagram shows the capacity range of the pump but for certain products, particularly high viscosity products, a larger pump with a lower speed must be selected. Contact Alfa-Laval for information regarding the correct pump size.

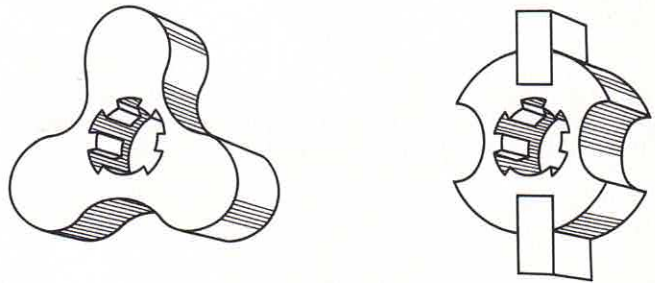
The following data must be known in order to select the correct pump size and drive unit:

- product to be pumped
- required capacity (or capacity range)
- required pressure (or pressure range)
- density of the product
- viscosity of the product
- operating temperature of the product
- max. temperature of medium to be pumped
- type of connection
- optional equipment
- voltage, frequency

## Shipping data

For pump only, without drive unit.

Net weight	Version 3040	3160
	135 kg	153 kg



1. standard 3-lobe rotor 2. optional extra a), 2-bladed rotor

Fig. 4. Rotors available for the MOG pumps