

Gear, Gerotor and Cam Pumps

1-1200-US



The gear, gerotor and cam pumps in this brochure are **lubricant pumps** that can be used for a large number of tasks.

The drives of gear and gerotor pumps must not be subjected to radial or axial loads.

The indicated delivery rates apply to an operating viscosity of 140 mm²/s and a back pressure of 5 bars.

If the operating viscosities or back pressures deviate from these values, the delivery rate and power requirements will change.

Permissible operating viscosity: 20 to 1000 mm²/s.

Filtering:

The pumps require filtration of the lubricant for a maximum particle size of 100 µm.

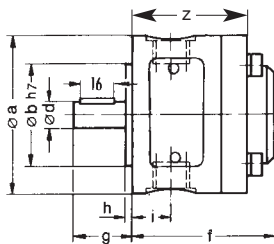
If the metering elements, valves, flow monitors, etc. as well as the friction points to be supplied require finer filtration, that must be provided for in the delivery line (recommended value 25 µm).

Gerotor pumps for clockwise or counterclockwise rotation, but with constant direction of rotation and delivery

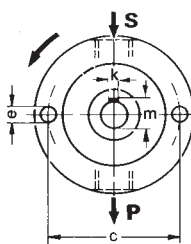
Gerotor pumps are distinguished by quiet running and little pulsation. They have an internally geared delivery element (trochoid gearing).



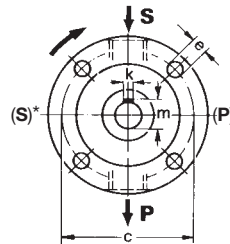
143-011-131



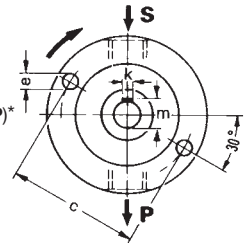
S = inlet (suction port)
P = outlet (pressure port)



Type X
Direction of rotation:
counterclockwise



Type Y
clockwise



Type Z
clockwise

*) with model 143-011-500

Order No.	Max. delivery rate at 1400 rpm [l/min]	Max. back pressure [bars]	Required drive power at back pressure		Suction and pressure port	Type	Suction head ¹⁾ [mm]	Rotation	Dimensions [mm]												
			[kW]	[bars]					øa	øb	øc	ød	øe	f	g	h	i	k	m	z	
143-011-131	0.85 1.7 ²⁾	30	0.18 0.37	30 30	G 1/4	Z	1000	right	60	36	48	8 _{h5}	6.6	49	25	3	12.5	2	8.8	40	
143-011-151	2.5	50	0.18/0.37	20/50	G 3/8	X	1000	left	74	45	56	12 _{h6}	6.6	62	28	3	17	4	13.5	50	
143-011-161	5.25	50	0.37/0.75	20/50	G 1/2													69		18.5	60
143-011-171	9	50	0.55/1.1	20/50	G 1/2	Y	1000	right	88	56	70	14 _{h6}	6.6	77	30	3	20	5	16	67	
143-011-181-2	12.5	50	0.75/1.5	20/50	G 3/4													93		22	79
143-011-500	19	20	1.5	20	G 1	Y	1000	right	98	56	80	16 _{g5}	8.5	100	30	3	25	5	18	100	

¹⁾ with open delivery line at 1400 rpm

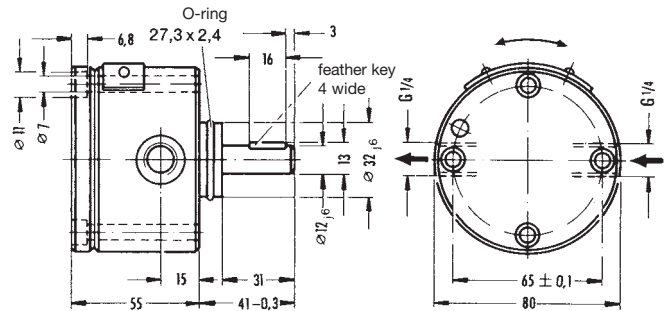
²⁾ at 2800 rpm

Order adapters with ports tapped for solderless tube connection separately.



Gerotor pump for clockwise and counterclockwise rotation, but for constant direction of delivery with changing direction of drive shaft rotation to DIN 69001, Part 17 A

This pump is especially suitable for direct gear drive. When the pump is used in systems that do not have an open delivery line, e.g. which have a check valve, safety valve or closed bearings, it is necessary to provide for a venting aid.

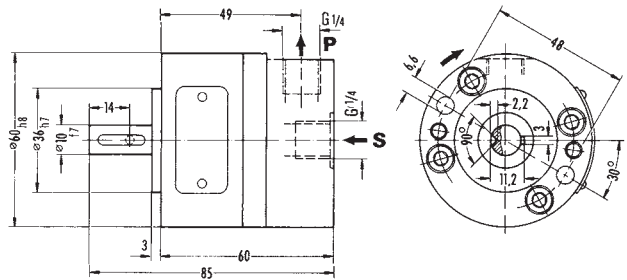


Order No.	Delivery rate ³⁾ per revolution [ccm]	Speed range [rpm]	Max. back pressure [bars]	Suction head ⁴⁾ [mm]	Direction of rotation
143-011-560	4	200-2000	20	1000	any

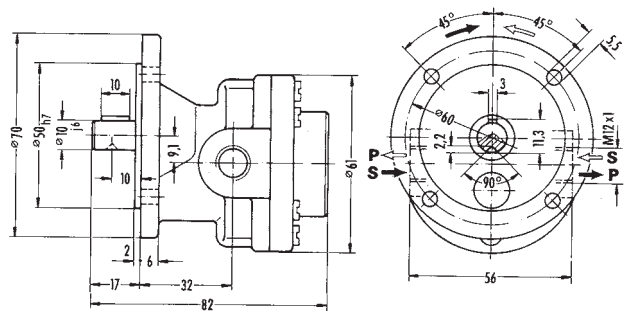
³⁾ Corresponds to 5.4 l/min at 1400 rpm as related to an operating viscosity of 140 mm²/s at a back pressure of 1 bar.
⁴⁾ with open delivery line

Gear pumps for clockwise or counterclockwise rotation, with constant direction of rotation and delivery

ZP12-2



ZP1 / ZP1-S1



Pay attention to information on direction of rotation (viewing the shaft).

Order No.	Max. delivery rate at 1400 rpm [l/min]	Max. back pressure [bars]	Required drive power [kW]	Suction head ⁵⁾ [mm]	Direction of rotation
ZP12-2	1.2	25	0.18	500	right
ZP1 ZP1-S1	2.5	20	0.18	1000	right left

⁵⁾ with open delivery line at 1400 rpm

Order adapters with ports tapped for solderless tube connection separately.

Cam pumps for clockwise or counterclockwise rotation, but for constant direction of delivery with changing direction of rotation.

With these valveless piston pumps the piston is driven directly via a cam so that only three constantly moving elements are involved. This configuration results in dependable operation and a long service life.

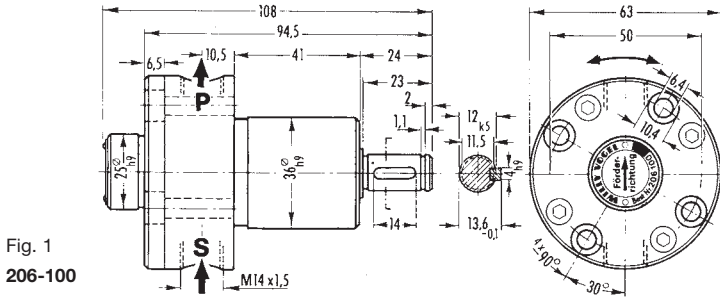


Fig. 1
206-100

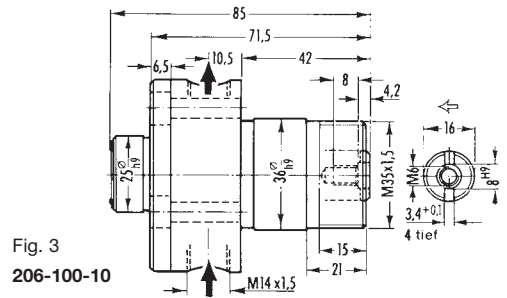


Fig. 3
206-100-10

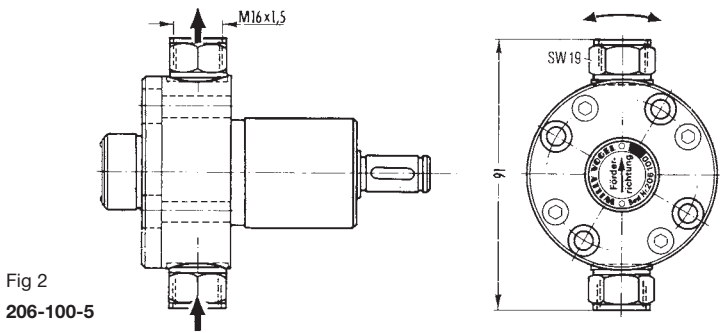


Fig 2
206-100-5

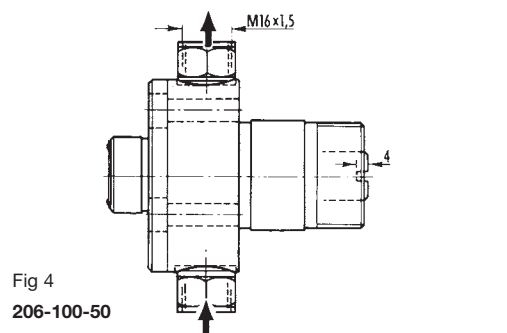


Fig 4
206-100-50

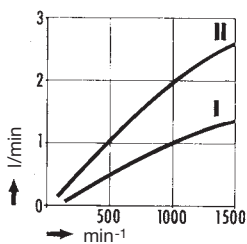
Order No.	Fig.	Model	Delivery rate ⁶⁾ at 1500 rpm [l/min]	Max. back pressure [bars]	Permissible speed range [min ⁻¹]	Suction head ⁷⁾ (with open delivery line) [mm]	Ext. suction and delivery tube diam. [mm]	Direction of rotation
206-100	1	with shaft butt	1.3	5	50-1500	1000	8	any
206-100-5	2		2.6	3			10	
206-100-10	3	with slotted coupling	1.3	5	50-1500	1000	8	any
206-100-50	4		2.6	3			10	

The fluids to be pumped must have enough lubricity for the pump to lubricate itself.

Port tapped for solderless tube connection.

⁶⁾ The delivery rate depends on the speed, viscosity, suction and delivery head (cf. diagram).

⁷⁾ The suction head depends on the speed and viscosity.



I = 206-100
206-100-10
II = 206-100-5
206-100-50



206-100



206-100-10

The diagram shows the delivery rate for a suction head of 0.5 m at 3 bars back pressure for a mineral oil with a viscosity of 140 mm²/s.



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Notice!

All products from VOGEL may be used only for their intended purpose. If operating instructions are supplied together with the products, the provisions and information therein of specific relevance to the equipment must be observed as well.

In particular, we call your attention to the fact that hazardous materials of any kind, especially the materials classified as hazardous by EC Directive 67/548/EEC, Article 2, Par. 2, may only be filled into VOGEL centralized lubrication systems and components and delivered and/or distributed with the same after consultation with and written approval from VOGEL.

All products manufactured by VOGEL are not approved for use in conjunction with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1013 mbars) by more than 0.5 bar at their maximum permissible temperature.