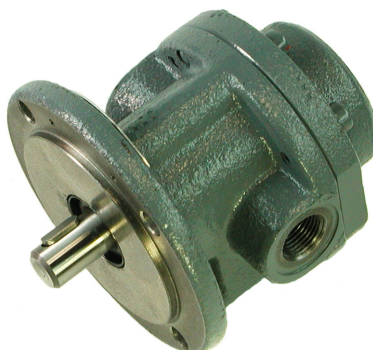


Gerotor, Gear and Cam Pumps

Gerotor pump 143-011-131



Gear pump ZP1



Cam pump 206-100



The gerotor, gear 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 $140 \text{ mm}^2/\text{s}$ 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 $1000 \text{ mm}^2/\text{s}$.

Filtering

The pumps require filtration of the lubricant for a maximum particle size of $100 \mu\text{m}$.

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 $25 \mu\text{m}$).

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

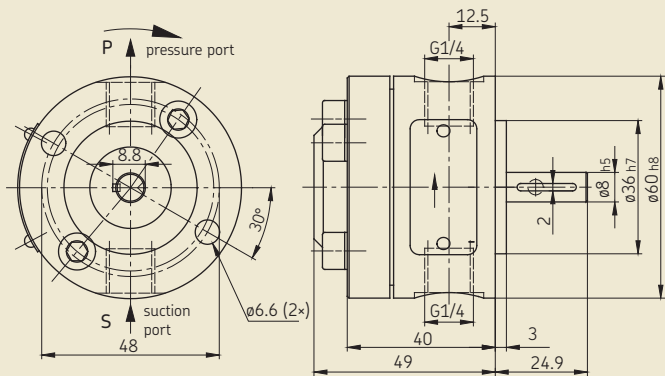
The shaft drive has to be without any radial or axial load.
See also the important product usage information on the back cover.

Order No.	Delivery rate ¹⁾ at 1400 rpm [l/min]	Max. back pressure [bar]	Required drive power at back pressure [kW] [bar]		Suction and pressure port S / P	Max. suction head ²⁾ [mm]	Direction of rotation	L1 [mm]	L2 [mm]	L3 [mm]	Fig.
143-011-131	0.85 1.7 (at 2800 min ⁻¹)	30 30	0.18 0.37	30 30	G 1/4	1000	right				1
143-011-151	2.5	50	0.18/0.37	20/50	G 3/8	1000	left				2
143-011-161	5.25	50	0.37/0.75	20/50	G 1/2	1000	right	18.5	56.3	69	3
143-011-171	9	50	0.55/1.1	20/50	G 1/2	1000	right	20	64.3	77	
143-011-181-2	12.5	50	0.75/1.5	20/50	G 3/4	1000	right	22	76.3	89	
143-011-500	19	20	1.5	20	G 1	1000	right				4

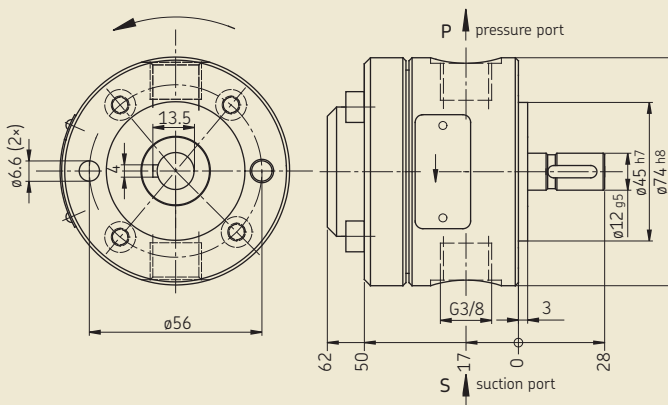
2) with open delivery line at 1400 rpm

Direction of rotation (viewing on the drive shaft) consider.
Order adapters with ports tapped for solderless tube connection separately.

143-011-131



143-011-151



Gerotor pumps

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

Figure 3

143-011-161, 143-011-171, 143-011-181-2

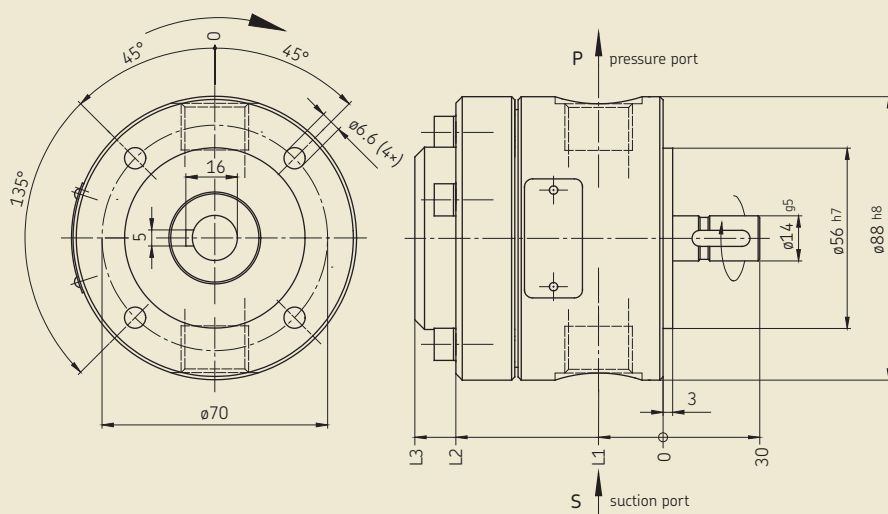
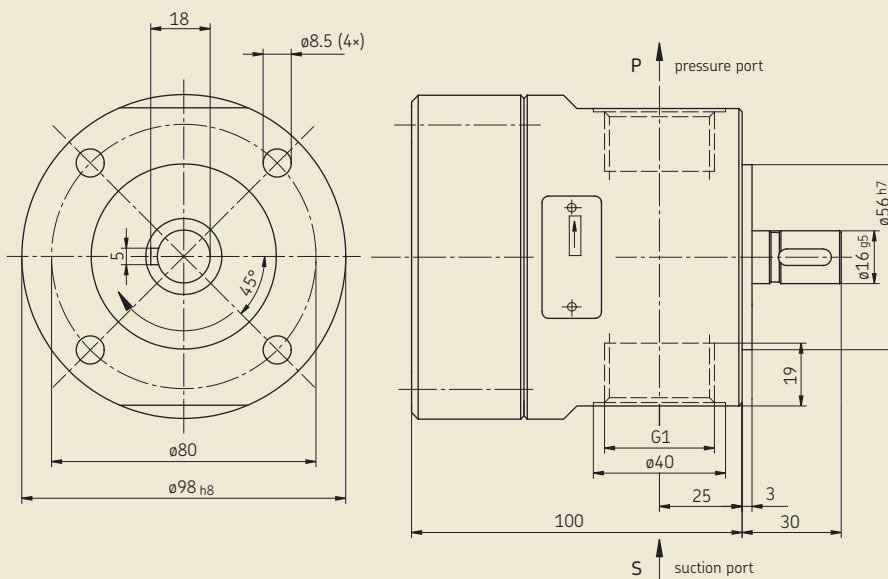


Figure 4

143-011-500



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.

The shaft drive has to be without any radial or axial load.

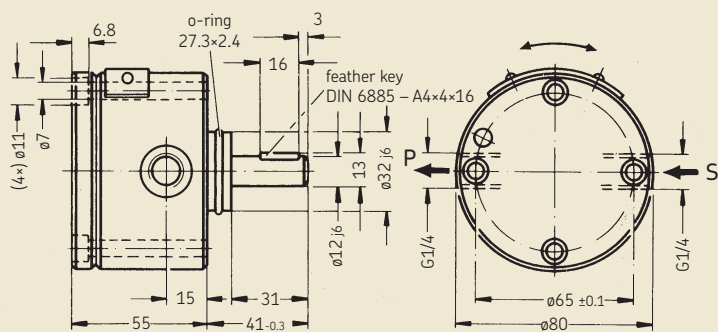
When the pump is used in systems that do not have an open delivery line, e.g. which have a check valve, safety valve or closed bearings, it is necessary to provide for a venting aid.

Order No.	Delivery rate per revolution ¹⁾ [cm ³]	Speed range [rpm]	Max. back pressure [bar]	Suction head ²⁾ [mm]	Direction of rotation	Figure
143-011-560	4	200-2000	20	1000	any	5

¹⁾ 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.
²⁾ with open delivery line

Figure 5

143-011-560



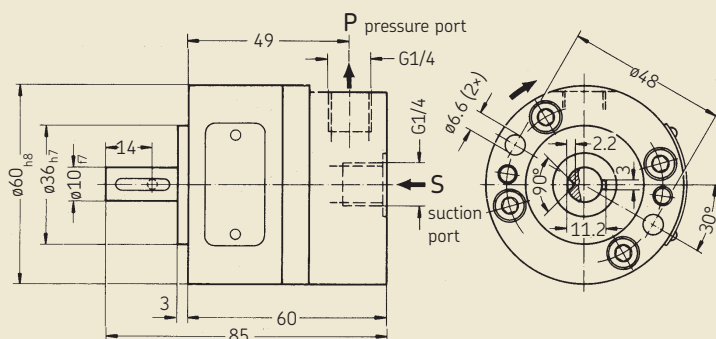
S = suction port
P = pressure port

Order No.	Delivery rate at 1400 rpm [l/min]	Max. back pressure [bar]	Required drive power [kW]	Suction head ¹⁾ [mm]	Direction of rotation	Figure
ZP12-2	1.2	25	0.18	500	right	6
ZP1 ZP1-S1	2.5	20	0.18	1000	right left	7

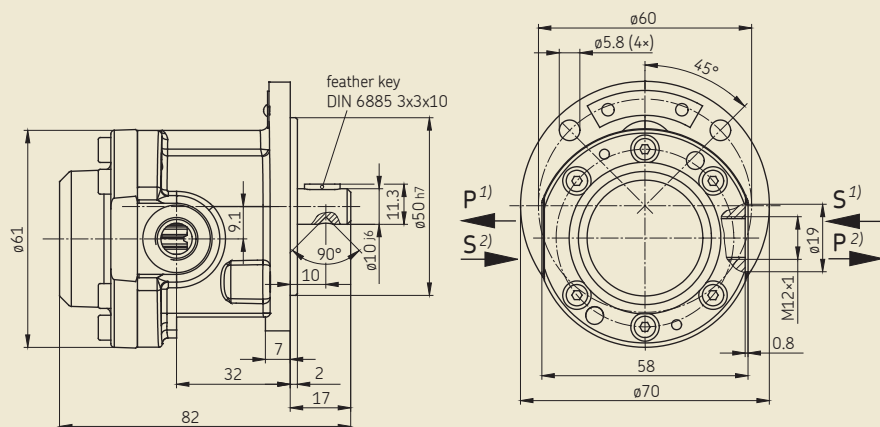
¹⁾ with open delivery line at 1400 rpm

Direction of rotation (viewing on the drive shaft) consider.
Order adapters with ports tapped for solderless tube connection separately.

ZP12-2



ZP1, ZP1-S1



- 1) **ZP1:**
Direction of rotation right (viewing on the drive shaft)
- 2) **ZP1-S1:**
Direction of rotation left (viewing on the drive shaft)

S = suction port
P = pressure port

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.

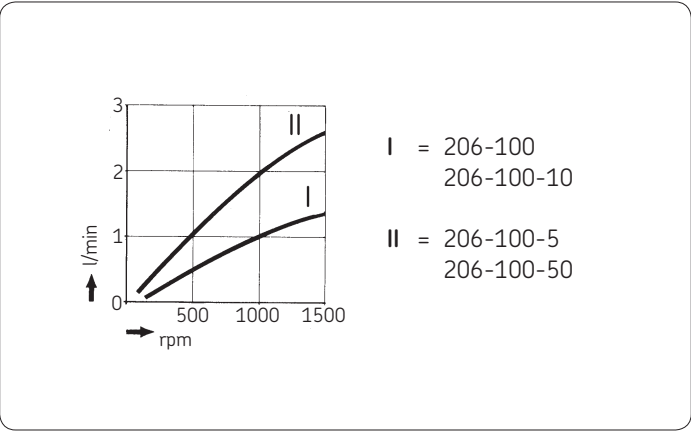
The fluids to be pumped must have enough lubricity for the pump to lubricate itself.

This configuration results in dependable operation and a long service life.

Order No.	Delivery rate ¹⁾ at 1500 rpm [l/min]	Max. back pressure [bar]	Permissible speed range [rpm]	Suction head ²⁾ [mm]	Ext. suction and delivery tube diam. [mm]	Direction of rotation	Model	Figure
206-100	1.3	5	50-1500	1000	8	any	with shaft butt	8
206-100-5	2.6	3			10			9
206-100-10	1.3	5	50-1500	1000	8	any	with slotted coupling	10
206-100-50	2.6	3			10			11

¹⁾ The delivery rate depends on the speed, viscosity, suction and deliveryhead (cf. diagram).
²⁾ With open delivery line; the suction head depends on the speed and viscosity.

Order adapters with ports tapped for solderless tube connection separately.



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.

[illegible]

206-100-10

206-100-5

The technical drawing shows two views of a valve. The left view is a side elevation showing a central body with two ports at the top and bottom. The top port is labeled 'P' with an upward arrow, and the bottom port is labeled 'S' with an upward arrow. The top port is also labeled 'M16x1.5'. The right view is an end view showing a circular flange with eight bolt holes. A central arrow points upwards. The top of the flange is labeled 'WAF 19'. A dimension line on the left indicates a height of 91. A double-headed arrow at the top indicates a width or diameter.

206-100-50

Technical drawing of a hydraulic cylinder, labeled 206-100-50. The drawing shows a side view of the cylinder with a central piston rod. The total length of the cylinder is dimensioned as 91. The piston rod is dimensioned as M16x1.5. The drawing includes labels P and S for pressure and suction ports, and a label 91 for the total length.

1-1200-EN

Order No. 1-1200-EN

Subject to change without notice! (07/2009)

Important product usage information

All products from SKF may be used only for their intended purpose as described in this brochure and in any instructions. If operating instructions are supplied with the products, they must be read and followed.

Not all lubricants are suitable for use in centralized lubrication systems.

SKF does offer an inspection service to test customer supplied lubricant to determine if it can be used in a centralized system. SKF lubrication systems or their components are not approved for use 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.

Hazardous materials of any kind, especially the materials classified as hazardous by European Community Directive EC 67/548/EEC, Article 2, Par. 2, may only be used to fill SKF centralized lubrication systems and components and delivered and/or distributed with the same after consulting with and receiving written approval from SKF.

Further brochures

1-9201-EN Transport of Lubricants in Centralized Lubrication Systems

SKF Lubrication Systems Germany AG

Motzener Strasse 35/37 · 12277 Berlin · Germany

PF 970444 · 12704 Berlin · Germany

Tel. +49 (0)30 72002-0 · Fax +49 (0)30 72002-111

www.skf.com/lubrication

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