

Radial piston pump

Type BRK1002

heavy version

up to **1000 bar**

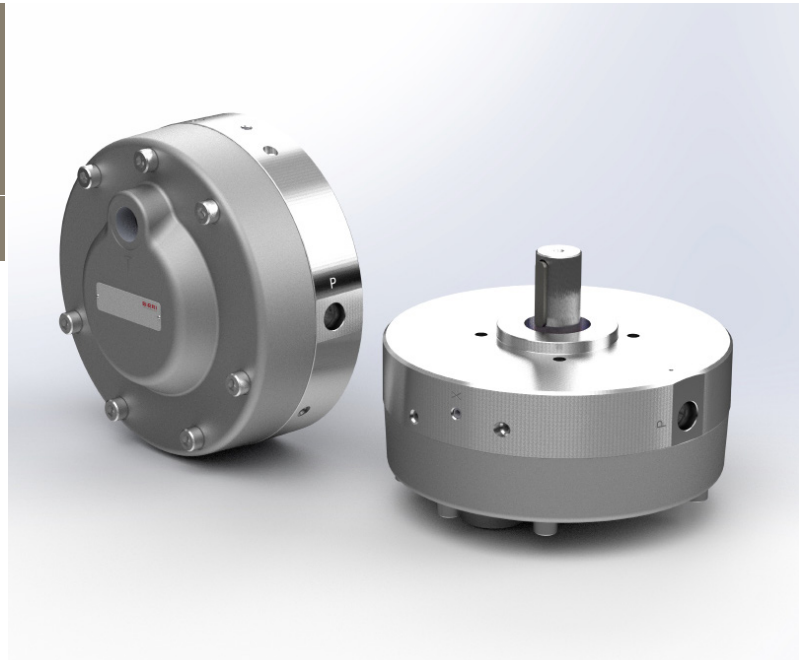
1.1 to 6.33cm³/rev

500 bar → see data sheet BRK501/502

700 bar → see data sheet BRK701/702

Features

- High volumetric efficiency
- Selfventing and selfpriming
- Low pulsation
- Combination with gear pump possible (see separate technical data sheet BKP)

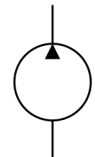


Applications

- Specially designed for demanding applications with continuous pressures up to 1000 bar → long economic lifetime!
- Machine tools
- Clamping device
- Power units (e.g. for presses)
- Test benches
- Accumulator charging systems
- Lifting and advancing systems

Design

- Radial piston pump of modular design
- With valve controlled pumping elements
- With 7 pumping elements



Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)	
Fluid temperature range	-20 to 80 °C	
Ambient temperature range	-30 to 50 °C	
Viscosity range	5 to 220 mm ² /s	
Filtration (recommendation)	according to NAS 1638 class 6 resp. ISO/DIN 4406 17/15/12	
Max. operating pressure	1000 bar	
Operating pressure suction side	-0.2 bar to 0.5 bar gauge pressure	
Displacement volume	1.1 to 6.33 cm ³ /rev	
Axial force onto driving shaft	can't be taken up	
Radial force onto driving shaft	on request	
Max. rotation speed	2000 rpm	
Direction of rotation	any	
Suction height	max. 500 mm	
Weight	see overview "product information"	
Materials	pressure flange:	high-strength steel
	driving shaft:	steel
	cover:	diecast aluminium

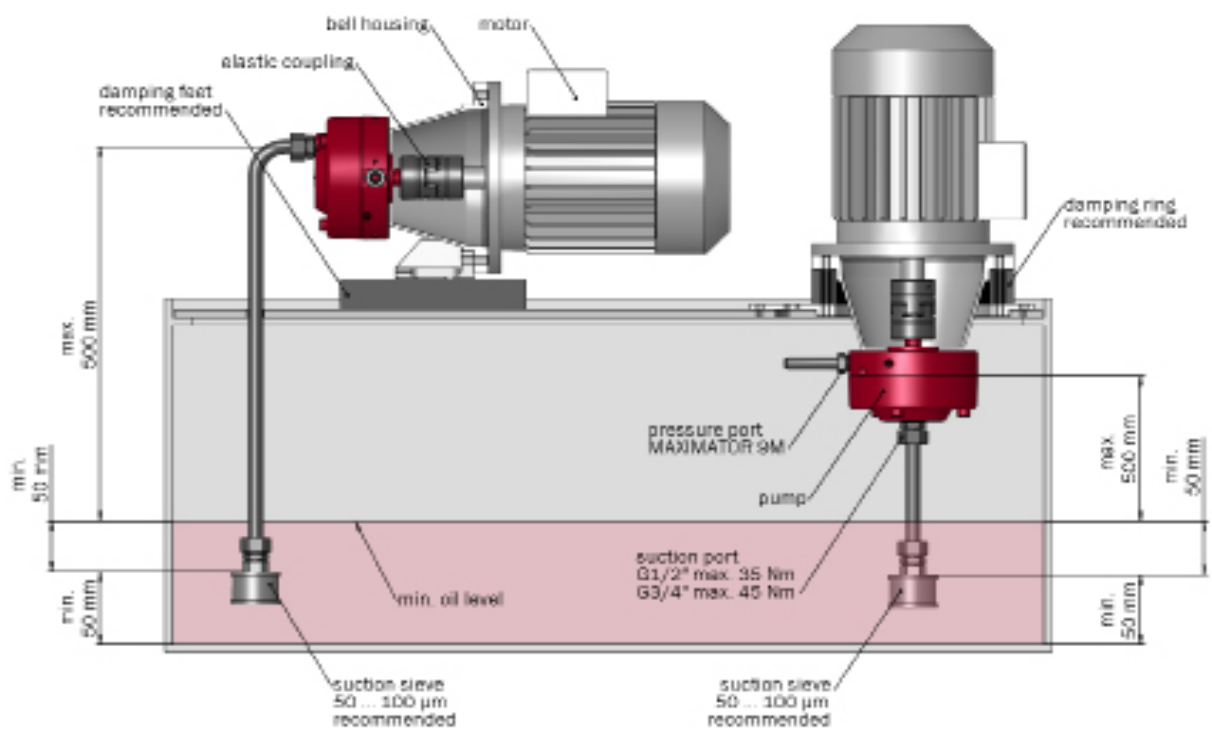
Type BRK1002

heavy version
to 1000 bar
1.1 up to 6.33 cm³/rev

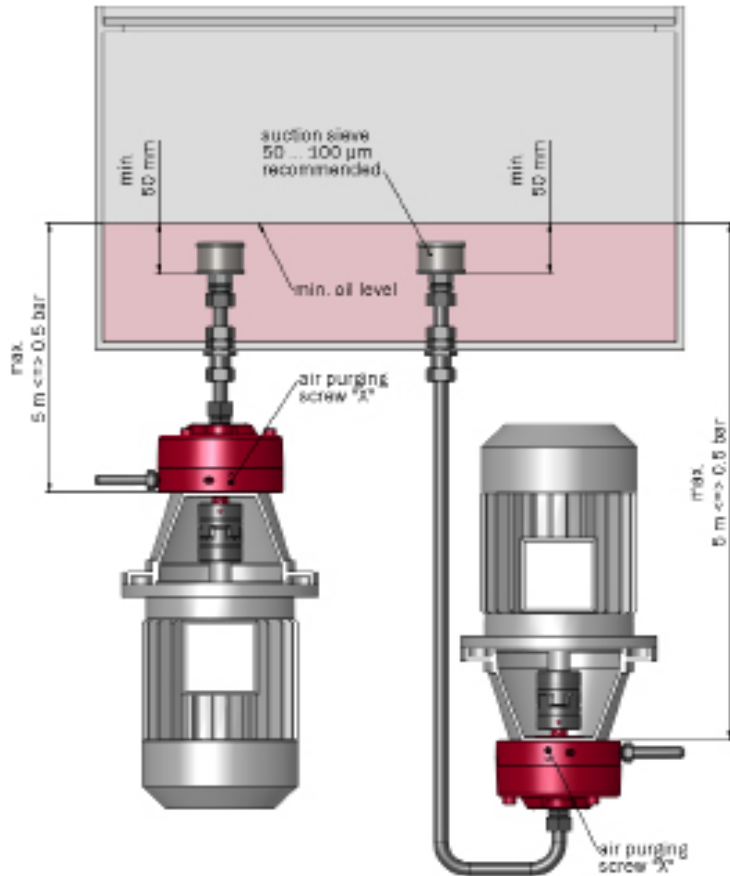
Type code

Example	BRK 1002 - 3,56 - 1000 - V - C	00
Radial piston pumps		Design 00 ... 99 For internal purposes
Size	1002	
Displacement volume [cm³/rev]	See overview "Product information"	Index Please leave blank For internal purposes
Max. operating pressure [bar]	See overview "Product information"	
Seal material	V FKM other seal materials on request	Design revision For internal purposes

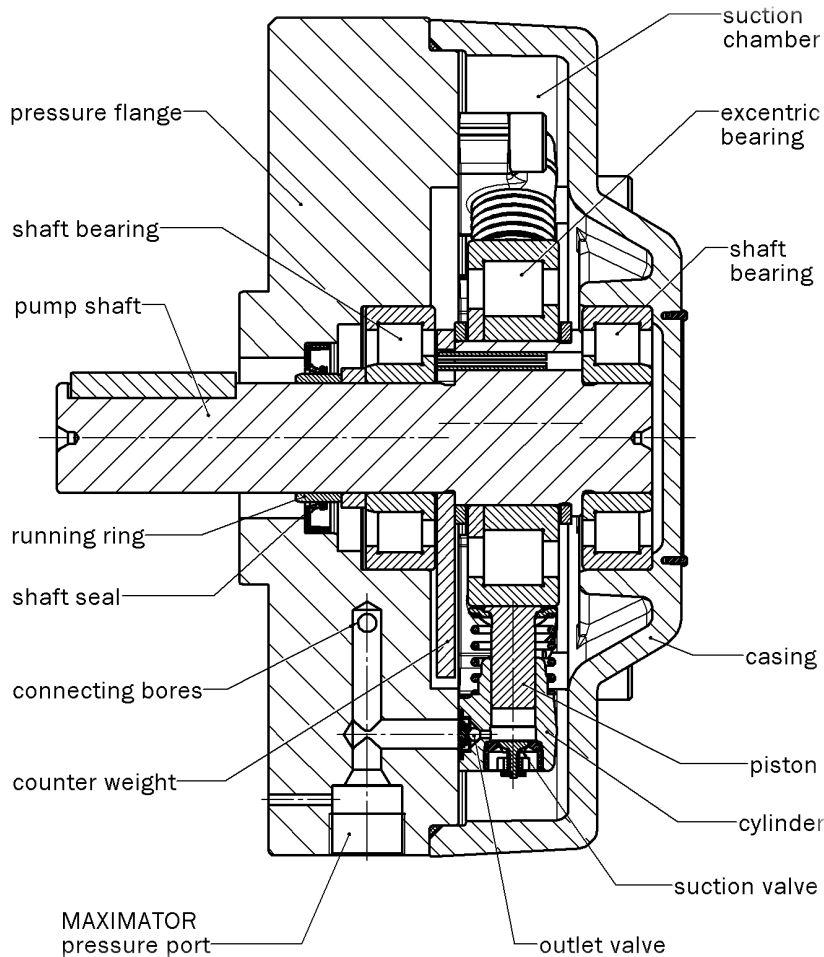
Mounting



Type BRK1002
 heavy version
 to 1000 bar
 1.1 up to 6.33 cm³/rev



Main components



Type BRK1002
heavy version to 1000 bar 1.1 up to 6.33 cm ³ /rev

Product information

size	displacement volume [cm ³ /rev]	max. operating pressure [bar]	number of pumping elements	weight [kg]	max. torque* [Nm]	max. power* [kW]	part no.
1002	1.10	1000	7	21.7	22.09	3.47	4488424
1002	1.58	1000	7	21.7	31.82	5.00	4488535
1002	2.81	1000	7	21.7	56.56	8.88	4488537
1002	3.56	1000	7	21.7	71.58	11.24	4488538
1002	4.40	900	7	21.7	79.54	12.49	4488539
1002	6.33	850	7	21.7	108.17	16.99	4488540

* at n = 1500 1/min; $\eta_t = 0.8$; p = p_{max}

Calculation of driving motor power

$$P = \frac{p \cdot V_g \cdot n \cdot k}{\eta_t \cdot 600 \cdot 10^3}$$

P = driving power [kW]
 p = operating pressure [bar]
 V_g = displacement volume [cm³/rev]
 n = speed [rpm]
 η_t = overall efficiency approx. 0.8
 k = pulsation factor
 - with 7 pumping elements: k approx. 1.01

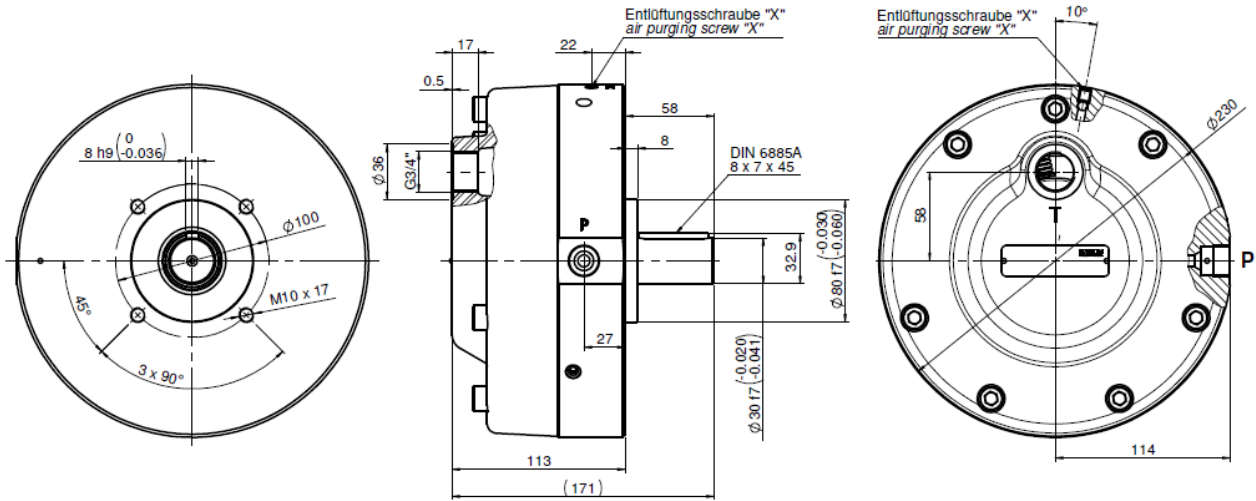
Calculation of driving motor torque

$$M = \frac{p \cdot V_g}{62,8 \cdot \eta_t}$$

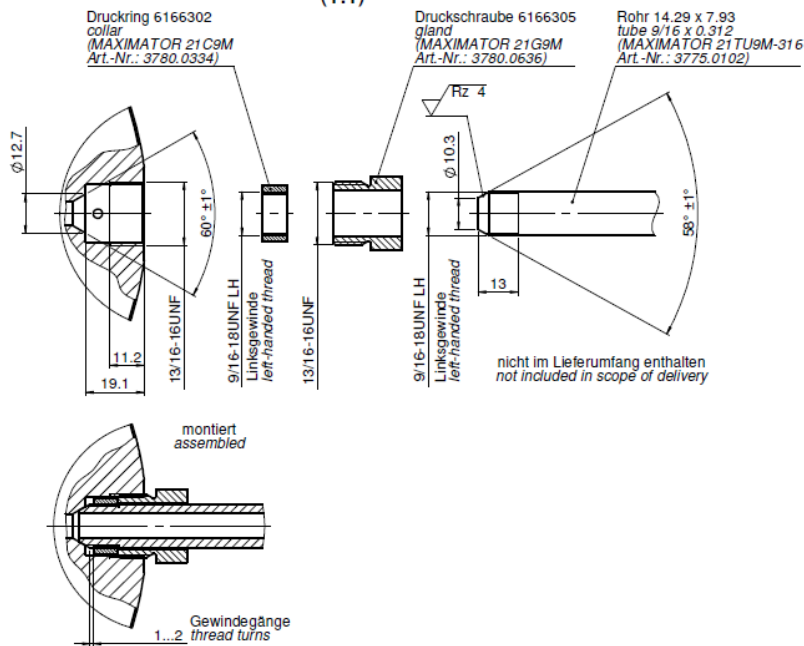
M = torque [Nm]

Dimensional drawings

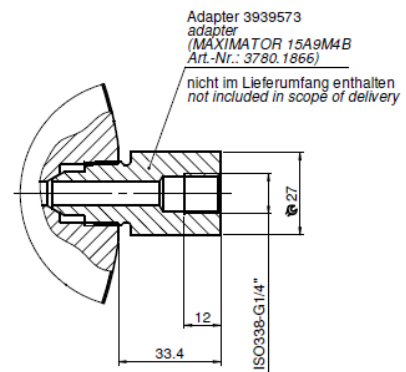
Size BRK1002



Anschluss "P" mit MAXIMATOR-Verrohrung
Connection "P" with MAXIMATOR piping
(1:1)



Anschluss "P" mit System-Anschluss G1/4"
Connection "P" with system adapter G1/4"
(1:1)



Spare parts

item description	part no.
seals kit for BRK1002	4541678
pressur collar MAXIMATOR	6166302
pressure gland MAXIMATOR	6166305
adapter G1/4" MAXIMATOR	3939573

Bieri Hydraulik AG

Könizstrasse 274
CH-3097 Liebefeld
Tel. +41 31 970 09 09 | Fax +41 31 970 09 10
info@bierihydraulics.com | www.bierihydraulics.com
5/5

The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.