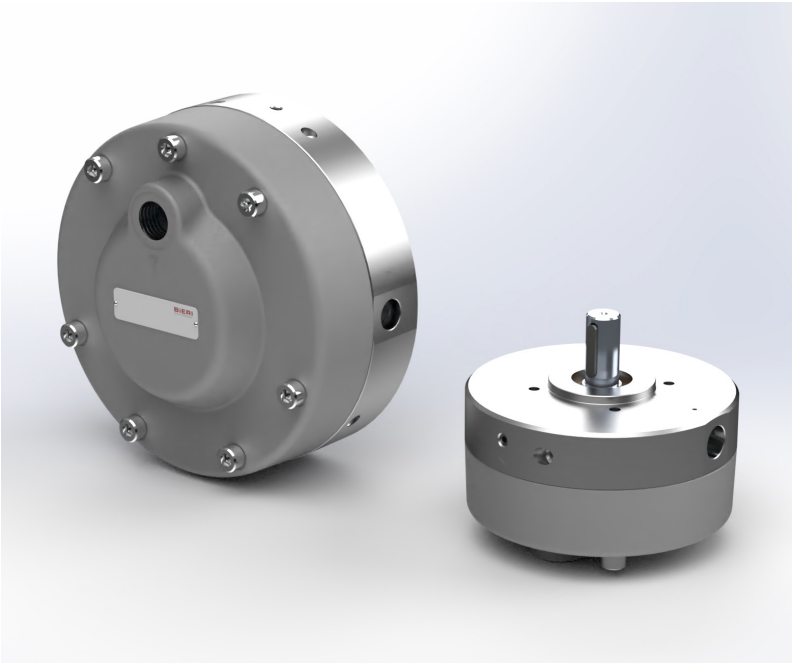
BIERI
HYDAC INTERNATIONAL

Radial piston pumps

Type BRK1001/1002

heavy version
up to **1000 bar**
0.47 to 3.56 cm³/rev

500 bar → see data sheet BRK501/502
700 bar → see data sheet BRK701/702



Features

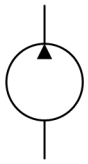
- High volumetric efficiency
- Selfventing and selfpriming
- Low pulsation

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 3, 5 or 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 mm²/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 (up to 5 bar on request)	
Displacement volume	0.47 to 3.56 cm³/rev	
Axial force onto driving shaft	can't be taken up	
Radial force onto driving shaft	on request	
Max. rotation speed	2000 to 3600 rpm (see overview "Product information")	
Direction of rotation	any	
Suction height	max. 500 mm	
Weight	see overview "Product information"	
Materials	pressure flange: driving shaft: cover:	high-strength steel steel diecast aluminium

Type BRK1001/1002

heavy version
to 1000 bar
0.47 up to 3.56 cm³/rev

Type code

Example | BRK | 1002 | - | 3,56 | - | 1000 | - | V | - | C | | | 00 |

Radial piston pumps

Size 1001, 1002

Displacement volume [cm³/rev] See overview "Product information"

Max. operating pressure [bar] See overview "Product information"

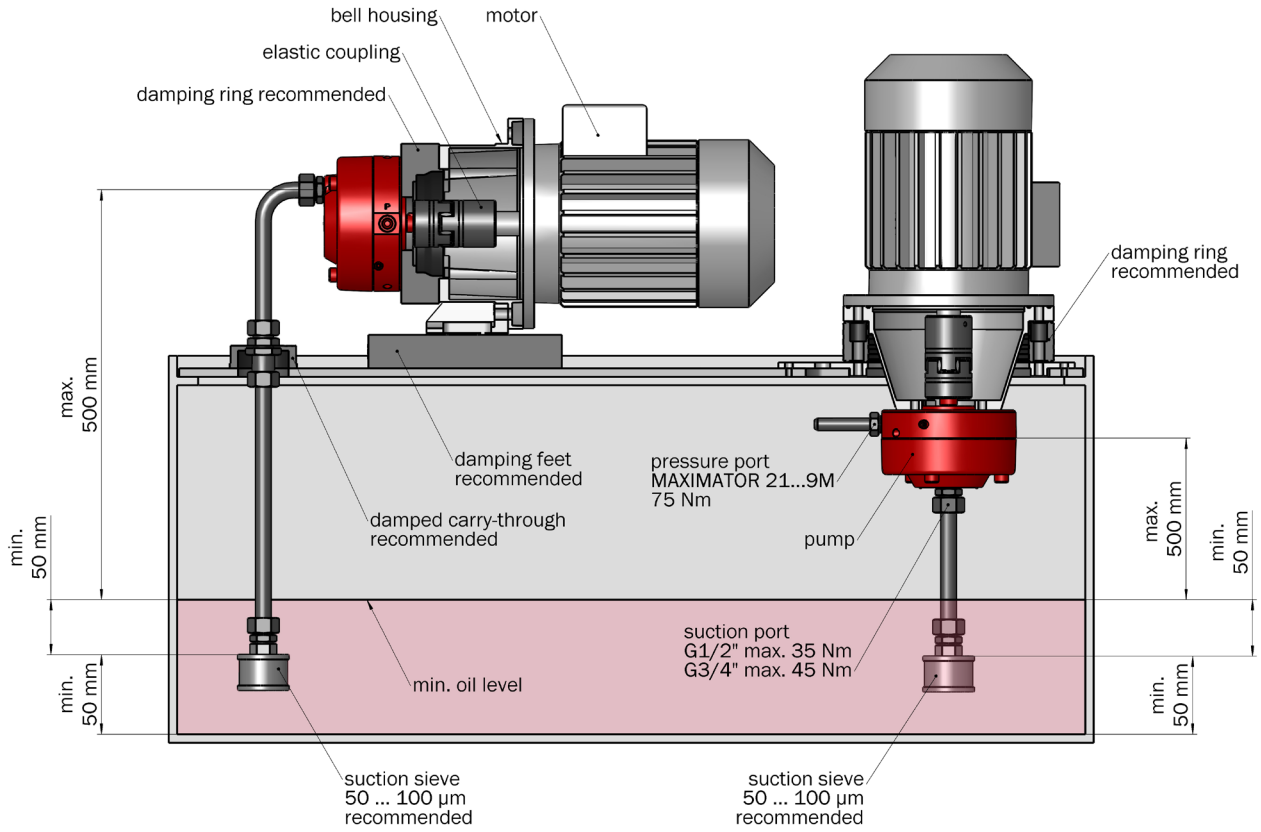
Seal material V FKM, other seal materials on request

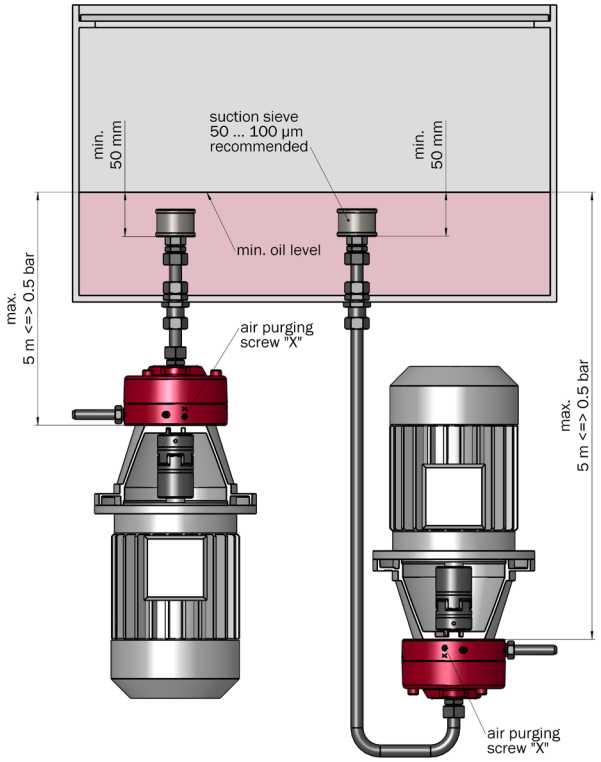
Design revision For internal purposes

Index Please leave blank, For internal purposes

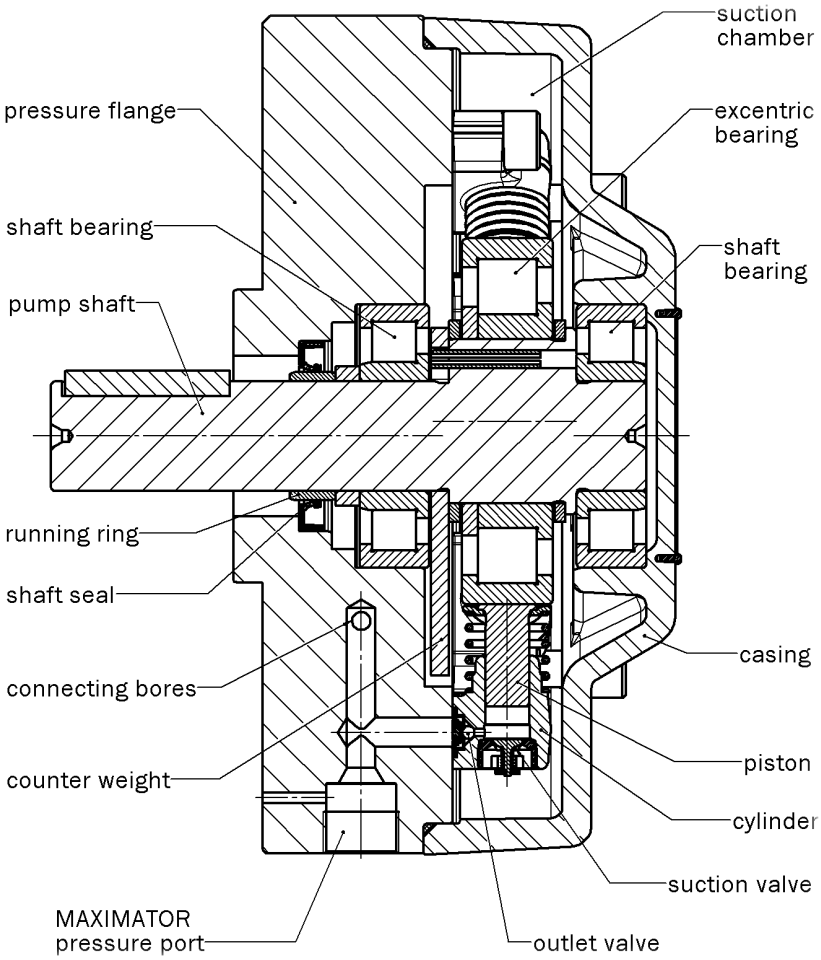
Design 00 ... 99, For internal purposes

Mounting





Main components



Product information

size	displacement volume [cm³/rev]	max. operating pressure [bar]	max. rotation speed [rpm]	number of pumping elements	weight [kg]	max. torque [Nm]	max. power* [kW]	part no.
1001	0.47	1000	3600	3	8.3	9.53	1.55	4488415
1001	0.68	1000	3600	3	8.3	13.51	2.23	4488416
1001	0.79	1000	3600	5	8.6	15.43	2.50	4488417
1001	1.13	1000	3600	5	8.6	21.85	3.60	4488418
1001	1.21	1000	2000	3	8.3	23.62	3.96	4488419
1001	1.53	1000	2000	3	8.3	29.76	5.01	4488420
1001	2.01	1000	2000	5	8.6	38.21	6.41	4488422
1001	2.54	900	2000	5	8.6	43.41	7.30	4488423
1002	1.10	1000	2000	7	21.7	21.42	3.47	4488424
1002	1.58	1000	2000	7	21.7	30.35	5.00	4488535
1002	2.81	1000	2000	7	21.7	53.06	8.88	4488537
1002	3.56	1000	2000	7	21.7	66.86	11.24	4488538

* at n = 1500 1/min; η_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 3 pumping elements: k approx. 1.05
- with 5 pumping elements: k approx. 1.02
- with 7 pumping elements: k approx. 1.01

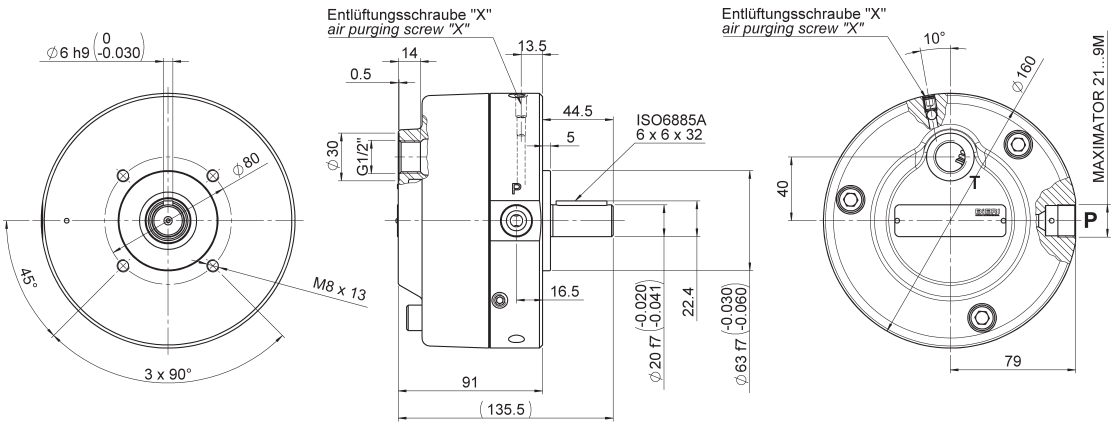
Calculation of driving motor torque

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

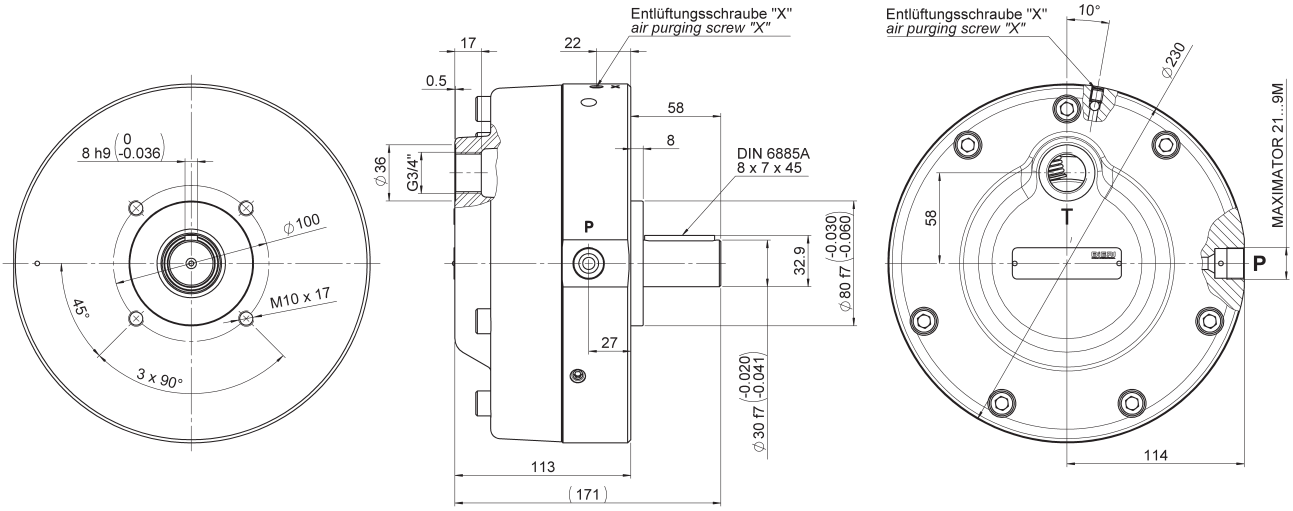
M = torque [Nm]

Dimensional drawings

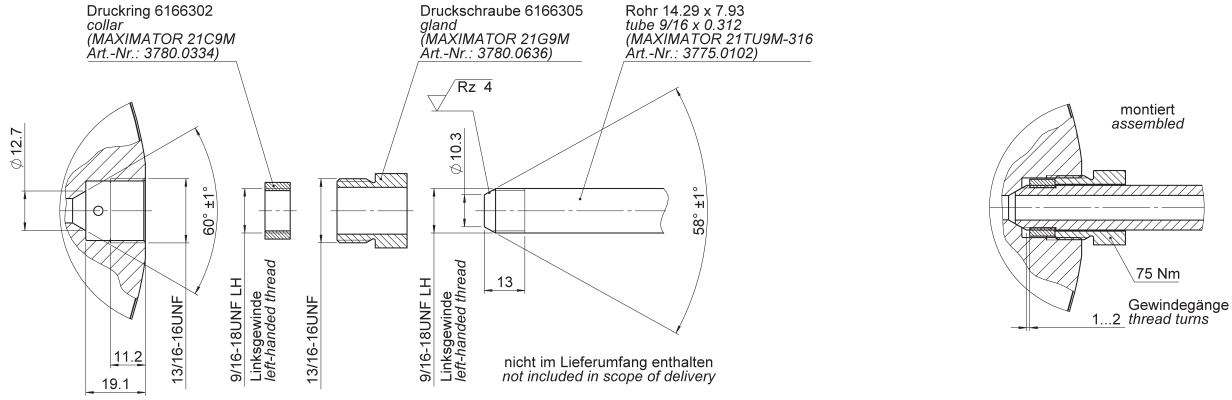
Size BRK1001



Size BRK1002

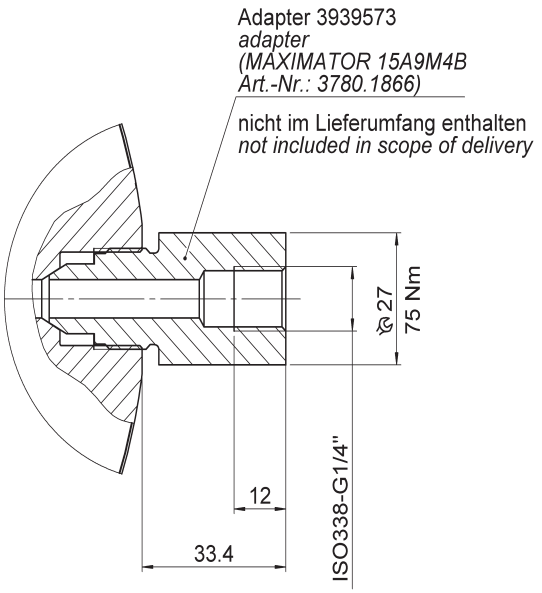


Connection „P“ for MAXIMATOR piping 21...9M



Accessories

item description	part no.
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