

Radial piston pumps

Type BRK701/702

heavy version

up to **700 bar**

0,24 to 8,14 cm³/rev

500 bar → see data sheet BRK501/502

1000 bar → see data sheet BRK11/12

Features

- High volumetric efficiency
- Self-venting and priming
- Low pulsation
- Combination with gear pump possible (see separate data sheet BKP)

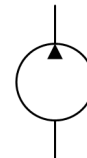


Applications

- Specially designed for demanding applications with continuous pressures up to 700 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, 7 or 9 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
Max. operating pressure	700 bar
Operating pressure suction side	-0,2 bar to 0,5 bar gauge pressure
Displacement volume	0,24 to 8,14 cm ³ /rev
Filtration (recommendation)	according to NAS 1638 class 6 resp. ISO/DIN 4406 17/15/12
Axial force onto driving shaft	can't be taken up
Radial force onto driving shaft	on request
Max. rotation speed	2000 min ⁻¹
Direction of rotation	any
Suction height	max. 500 mm
Weight	see overview "Product information"
Materials	pressure flange: forged steel driving shaft: steel cover: diecast aluminium

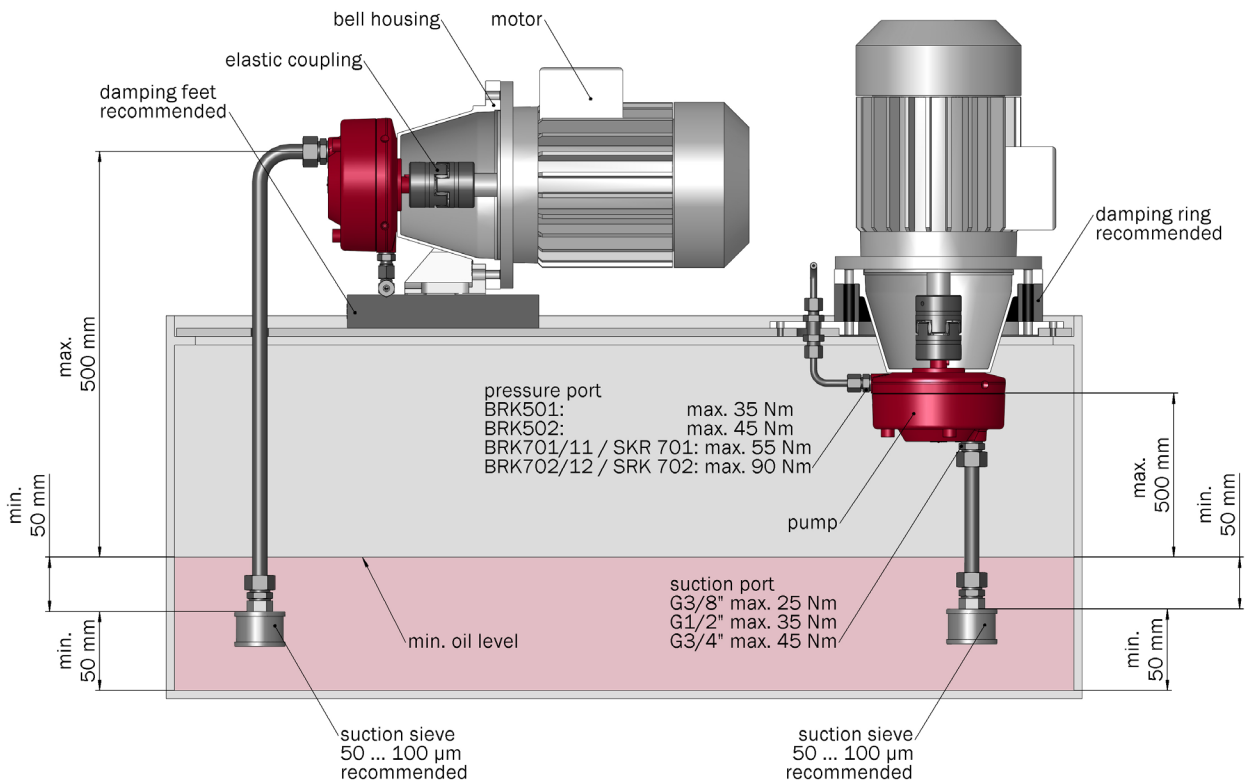
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Type code

Example	BRK 701 - 0,24 - 700 - V - C 00						
Radial piston pumps							Design 00 ... 99 For internal purposes
Size	701 702						Index Please leave blank For internal purposes
Displacement volume [cm³/rev]	See overview "Product information"						
Max. operating pressure [bar]	See overview "Product information"					Design revision For internal purposes	
Seal material	V	FKM	other seal materials on request				

Mounting



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.
701	0,24	700	3	5,7	3,45	0,54	3845253
701	0,34	700	3	5,7	4,96	0,78	3845317
701	0,47	700	3	5,7	6,89	1,08	3845318
701	0,60	700	3	5,7	8,82	1,39	3845319
701	0,68	700	3	5,7	9,92	1,56	3845320
701	0,76	700	3	5,7	11,16	1,75	3845321
701	0,79	700	5	6,0	11,16	1,75	3845322
701	0,94	700	3	5,7	13,78	2,16	3845323
701	1,03	700	3	5,7	15,07	2,37	3845335
701	1,13	700	5	6,0	16,07	2,52	3845336
701	1,21	700	3	5,7	17,64	2,77	3845337
701	1,31	700	3	5,8	19,20	3,02	3845338
701	1,53	700	3	5,8	22,33	3,51	3845340
701	1,66	700	3	6,2	24,26	3,81	3850172
701	1,88	700	3	6,2	27,56	4,33	3845344
701	2,01	700	5	6,5	28,56	4,49	3845365
701	2,54	700	5	6,5	36,15	5,68	3845366
701	2,71	700	3	6,2	39,69	6,23	3845367
701	3,14	700	5	6,5	44,63	7,01	3845369
701	4,52	500	5	6,5	45,90	7,21	3845372
702	4,52	700	5	15,1	64,26	10,09	3845374
702	5,65	700	9	15,7	79,54	12,49	3845386
702	6,33	700	7	15,4	82,72	12,99	3845387
702	7,31	700	9	15,7	80,83	12,70	3845388
702	8,14	700	9	15,7	81,81	12,85	3845389

* at n = 1500 rpm; $\eta_t = 0,8$; $p = p_{max}$

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 = 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
 - with 9 pumping elements: k approx. 1,00

Calculation of driving motor torque

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

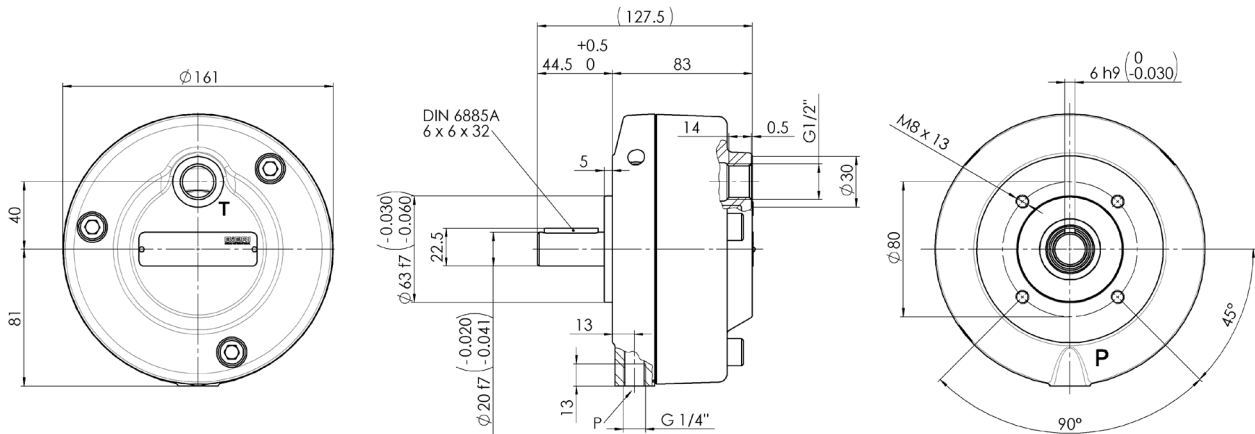
M = torque [Nm]
 V_g = displacement volume [cm³/rev]
 η = efficiency approx. 0,8
 p = operating pressure [bar]

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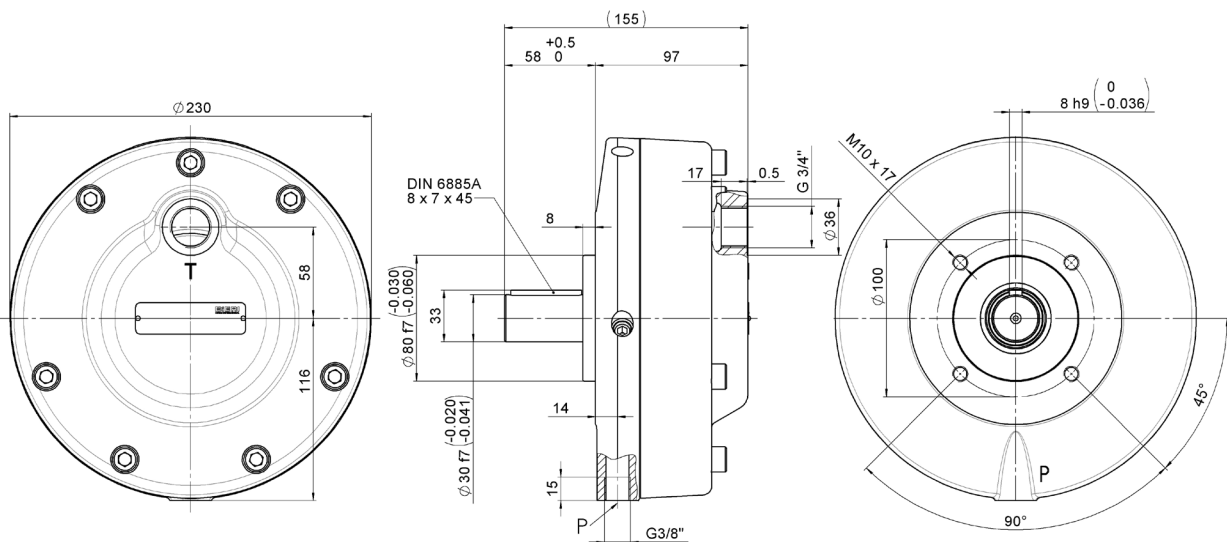
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Dimensional drawings

Size BRK701



Size BRK702



Spare parts

item description	part no.
seals kit for BRK701	4006555
seals kit for BRK702	4006559

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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.