Part number:

HYDROMA
HYDRAULICKÉ SYSTÉMY

HIDROMA SISTEMS
UKŁADY HYDRAULICZNE

HYDROMA
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

Radial piston pumps Type BRK
up to 1000 bar up to 6,3 cm³/rev

Features
High volumetric efficiency. Self-priming and venting. Low pulsation. Low noise level. Long life.
Specially suitable for demanding applications with continuous pressures up to 1000 bar. Combination with low pressure gear pumps possible.

The valve controlled radial piston pump is of modular construction and can be supplied with 3, 5 or 7 pistons per bank.

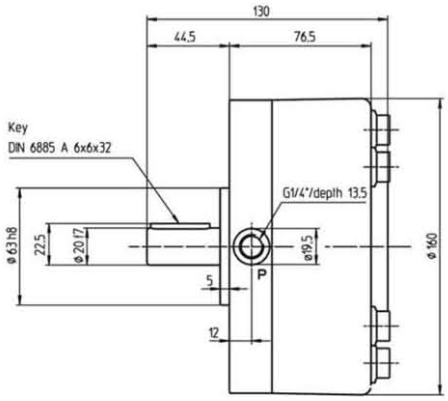
Multi outlet, other displacements, pressure- or revolution ranges on request. Combination with gear pumps as per separate data sheet for BKP.

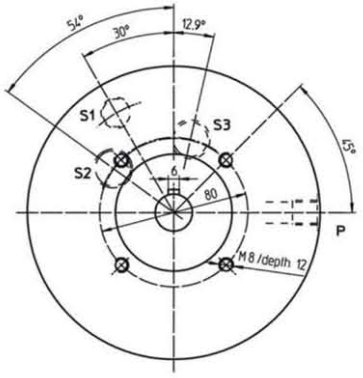
Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)
Fluid temperature range	NBR: -30 to 80 °C
	FPM: -20 to 80 °C
Ambient temperature range	-30 to 50 °C
Viscosity range	5 to 220 mm^2/s (optimal: 15 - 35)
Suction pressure	- 0,2 to 1,5 bar absolute
Filtration	according to NAS 1638, class 8 or ISO/DIN 4406 16/14
Material	pressure flange, driving shaft: steel
	cover: cast aluminium
Weight	see table
Installation position	any
Radial force / Axial force onto driving shaft	not allowed

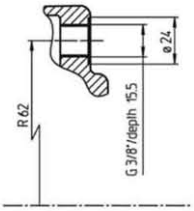
Radial piston pumps Type BRK
up to 1000 bar up to 6,3 cm³/rev

Dimension drawing sizes 01 and 11
Design revision A

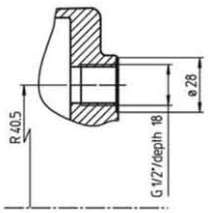




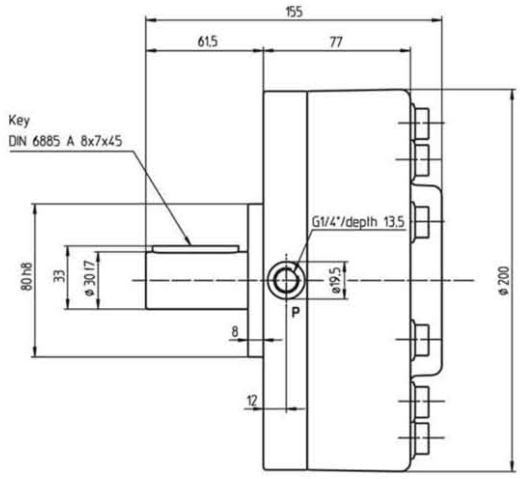
Suction
connection
S1 3 pistons

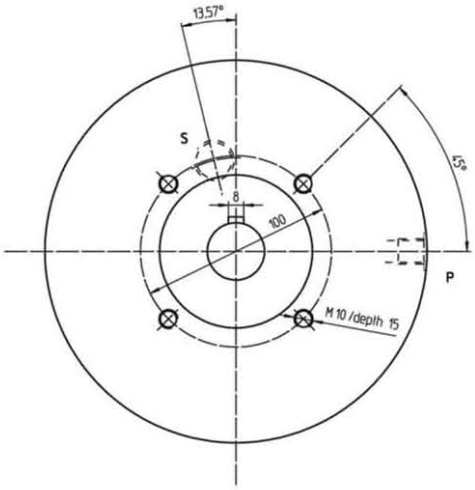


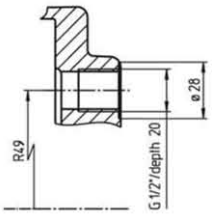
Suction
connection
S2 5 pistons
S3 7 pistons



Dimension drawing sizes 02 and 12
Design revision A







Radial piston pumps Type BRK
up to 1000 bar up to 6,3 cm³/rev

Ordering code: Example

BRK	01	-	0,47	-	1000	-	P	-			00

BRK – **Radial piston pump**

01 – **Size**

0,47 – **Displacement [cm³/rev]**

1000 – **Operating pressure max. [bar]**

P – **Seals**
P (NBR)
V (FPM)

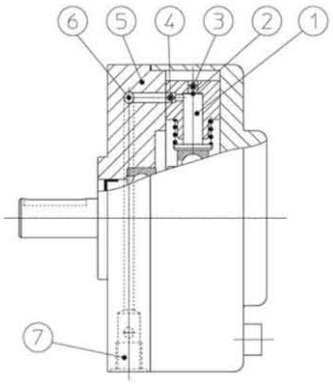
Design revision
see dimension drawings
(capital letters A-Z; identical letters equal same connecting dimensions)

Part index
Please leave it blank
(small letters a-z; different letters do not effect interchangeability)

00 – **Special design**
01 ... 99
(00 for standard)

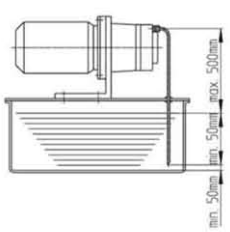
Function and design

A vacuum is created in the working space (2) during the suction stroke of the piston (1). The suction valve (3) is opened and the oil flows into the working space of the cylinder. The suction valves are closed and during the discharge stroke the oil flows through discharge valve (4) and collecting bores (6) to the flange (5). The oil is discharged through the pressure port (7).

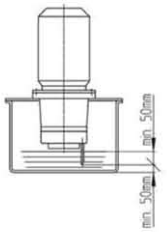


Installation recommendation

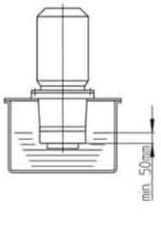
For very quiet runnung we recommend the use of a bell-housing with dampening flange and a flexible connecting coupling.



horizontal installation



vertical installation
with suction pipe



vertical installation
without suction pipe

Calculation of driving motor power

$$P = \frac{p \cdot V_g \cdot n \cdot k}{\eta_t \cdot 612 \cdot 10^3}$$

P = Driving power [kW]
p = Operating pressure [bar]
V_g = Displacement [cm³/rev]
n = Speed [rpm]
η_t = Overall efficiency approx. 0,9

k = Pulsation factor
- with 3 pistons: k approx. 1,1
- with 5 pistons: k approx. 1,0
- with 7 pistons: k approx. 1,0

Radial piston pumps Type BRK
up to 1000 bar up to 6,3 cm³/rev

Radial piston pumps BRK sizes 01 and 11

Number of pistons	Piston Ø mm	Displacement cm³/rev	Operating pressure max. bar	Speed max. rpm	Weight kg	Size
3	5	0,47	700	2000	7	01
3	5	0,47	1000			01
3	6	0,68	700			01
3	6	0,68	1000			01
3	8	1,21	700			01
3	8	1,21	1000			11
3	9	1,52	550			01
3	9	1,52	700			11
3	9	1,52	1000			11
3	10	1,88	450			01
3	10	1,88	700			11
3	10	1,88	850			11
3	12	2,71	300			01
3	12	2,71	550			11
5	5	0,78	700	2000	7,5	01
5	5	0,78	1000			01
5	6	1,13	700			01
5	6	1,13	1000			01
5	8	2,02	550			01
5	8	2,02	700			11
5	8	2,02	1000			11
5	9	2,54	450			01
5	9	2,54	700			11
5	9	2,54	1000			11
5	10	3,14	350			01
5	10	3,14	700			11
5	10	3,14	850			11
5	12	4,52	250			01
5	12	4,52	550			11
7	5	1,09	700	2000	8	01
7	6	1,58	700			01
7	8	2,83	450			01
7	8	2,83	700			11
7	9	3,56	350			01
7	9	3,56	700			11
7	10	4,40	300			01
7	10	4,40	550			11
7	12	6,33	200			01
7	12	6,33	400			11

Radial piston pump BRK sizes 02 and 12

Number of pistons	Piston Ø mm	Displacement cm³/rev	Operating pressure max. bar	Speed max. rpm	Weight kg	Size
7	5	1,09	1000	1800	12,5	02
7	6	1,58	1000			02
7	8	2,83	1000			02
7	9	3,56	800			02
7	9	3,56	1000			12
7	10	4,40	650			02
7	10	4,40	900			12
7	12	6,33	450			02
7	12	6,33	850			12