

Radial piston pumps

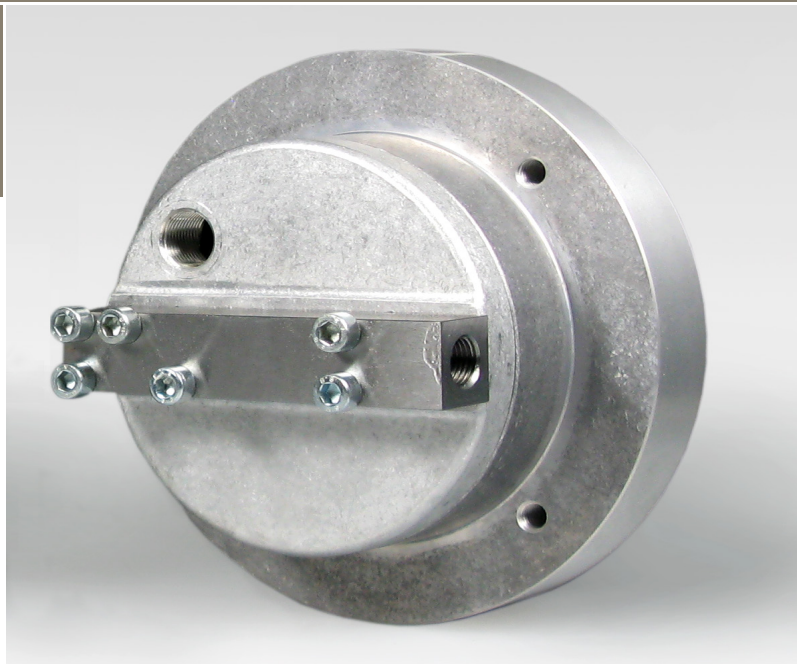
Type HRK

up to 700 bar

0.12 to 0.34 cm³/rev

Features

- High volumetric efficiency
- Self venting and priming
- Compact design
- Hollow shaft

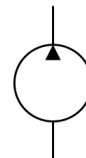


Applications

- Machine tools
- Clamping device
- Power units (e.g. for presses)
- Pull-off fixtures
- Lifting systems
- Mobile power unit
- Small units
- For test benches and pulsing load, use a BRK701 radial piston pump

Design

- With hollow shaft for direct assembly of motor without bell housing and coupling
- With 1 or 2 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	12 to 220 mm ² /s	
Max. operating pressure	700 bar	
Operation pressure suction side	-0.2 bar to 0.5 bar gauge pressure	
Displacement volume	0.12 to 0.34 cm ³ /rev	
Filtration (recommendation)	according to NAS 1638 class 6 resp. ISO/DIN 4406 17/15/12	
Speed range	500 to 3600 rpm	
Installation position	in tank (any)	
Direction of rotation	any	
Suction height	max. 150 mm	
Weight	see overview „Product information“	
Materials	eccentric shaft:	steel
	pressure port body:	steel
	pump housing and flange:	aluminium

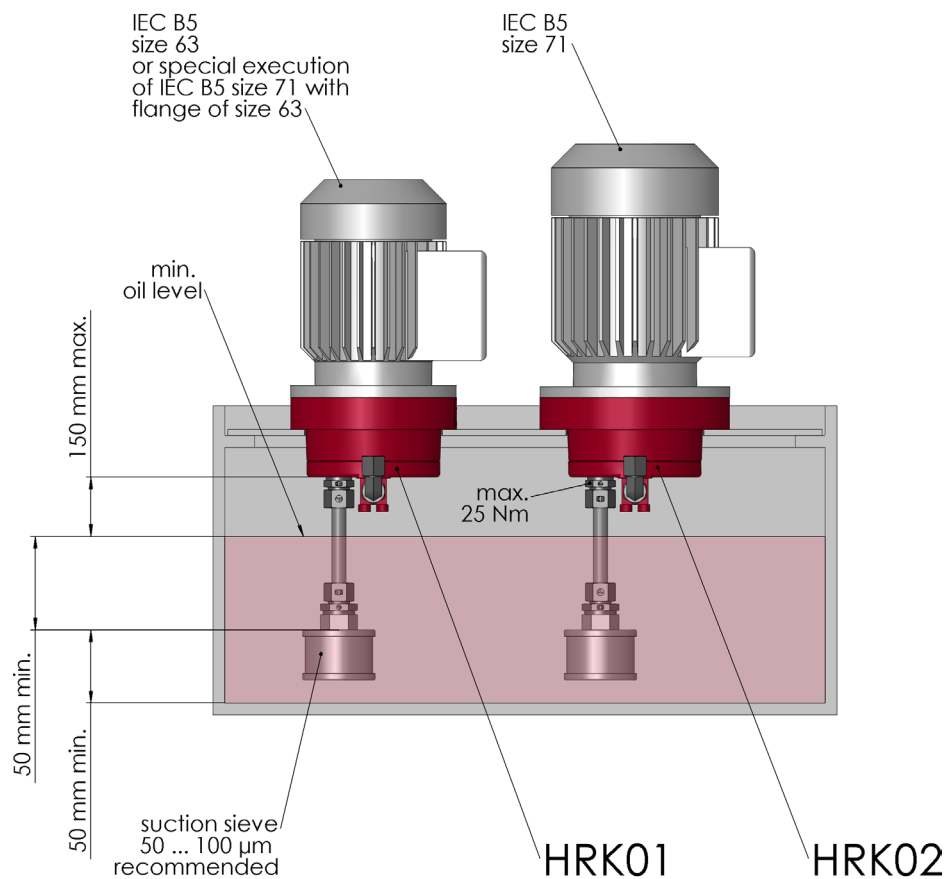
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Type code

Example	HRK	01	-	0,34	-	700	-	DV	-	V	-				00
Radial piston pumps															
Size	01 02														
Displacement volume [cm³/rev]	See overview „Product information“														
Max. operating pressure [bar]	See overview „Product information“														
Options	Default empty DV (pressure relief valve)														
Seal material	V FKM other seal materials on request														
	Design 00 ... 99 for internal purposes														
	Index Please leave blank for internal purposes														
	Design revision Please leave blank for internal purposes														

Mounting



Product information

Type code	size	displacement volume [cm ³ /rev]	number of pumping elements	DV ¹⁾	weight [kg]	max. torque ²⁾ [Nm]	max. power ²⁾ [kW]	part no.
HRK01-0,12-700-V-A*00	01	0.12	1	no	1.8	5.15	0.81	on request
HRK01-0,12-700-DV-V-A*00	01	0.12	1	yes	1.8	5.15	0.81	on request
HRK01-0,17-700-V-A*00	01	0.17	1	no	1.8	7.42	1.17	on request
HRK01-0,17-700-DV-V-A*00	01	0.17	1	yes	1.8	7.42	1.17	on request
HRK01-0,24-700-V-A*00	01	0.24	2	no	1.8	5.15	0.81	on request
HRK01-0,24-700-DV-V-A*00	01	0.24	2	yes	1.8	5.15	0.81	on request
HRK01-0,29-700-V-A*00	01	0.29	2	no	1.8	6.28	0.99	on request
HRK01-0,29-700-DV-V-A*00	01	0.29	2	yes	1.8	6.28	0.99	on request
HRK01-0,34-700-V-A*00	01	0.34	2	no	1.8	7.42	1.17	on request
HRK01-0,34-700-DV-V-A*00	01	0.34	2	yes	1.8	7.42	1.17	on request
HRK02-0,12-700-V-A*00	02	0.12	1	no	1.9	5.15	0.81	on request
HRK02-0,12-700-DV-V-A*00	02	0.12	1	yes	1.9	5.15	0.81	on request
HRK02-0,17-700-V-A*00	02	0.17	1	no	1.9	7.42	1.17	on request
HRK02-0,17-700-DV-V-A*00	02	0.17	1	yes	1.9	7.42	1.17	on request
HRK02-0,24-700-V-A*00	02	0.24	2	no	1.9	5.15	0.81	on request
HRK02-0,24-700-DV-V-A*00	02	0.24	2	yes	1.9	5.15	0.81	on request
HRK02-0,29-700-V-A*00	02	0.29	2	no	1.9	6.28	0.99	on request
HRK02-0,29-700-DV-V-A*00	02	0.29	2	yes	1.9	6.28	0.99	on request
HRK02-0,34-700-V-A*00	02	0.34	2	no	1.9	7.42	1.17	on request
HRK02-0,34-700-DV-V-A*00	02	0.34	2	yes	1.9	7.42	1.17	on request

¹⁾ DV: pressure relief valve

²⁾ at n = 1500 rpm; 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 1 pumping element: k approx. 3.10
 - with 2 pumping elements: k approx. 1.60

Calculation of driving motor torque

$$M = \frac{p \cdot V_g}{62.8 \cdot \eta_t}$$

M torque [Nm]

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0.12 to 0.34 cm³/rev

Dimensions drawings

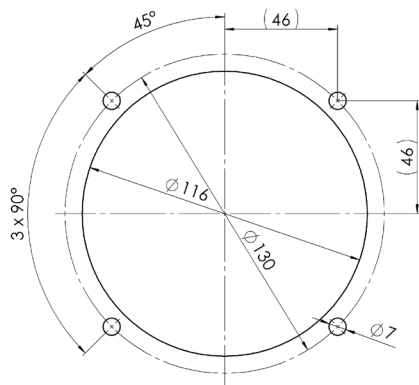
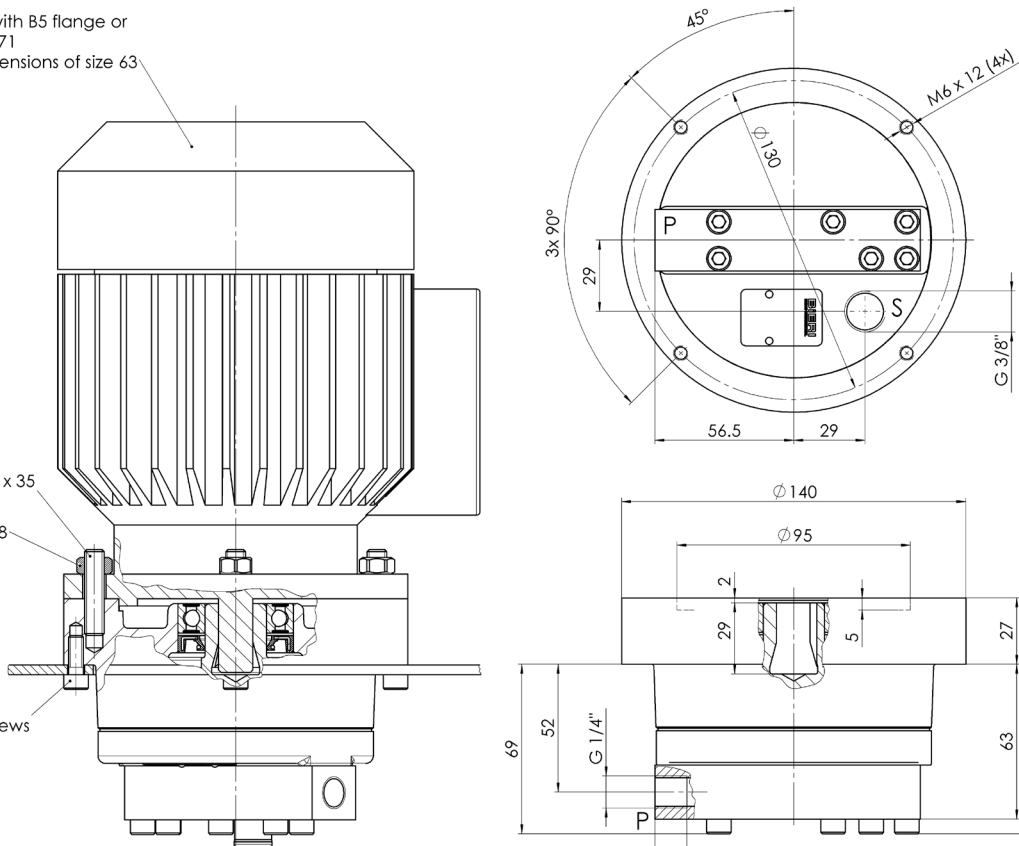
Size HRK01

2) IEC motor size 63 with B5 flange or special motor size 71 with B5 flange dimensions of size 63

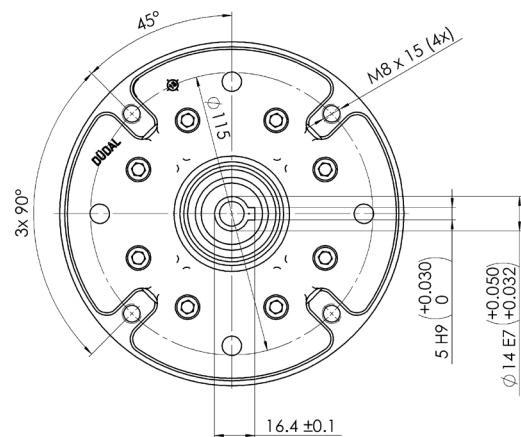
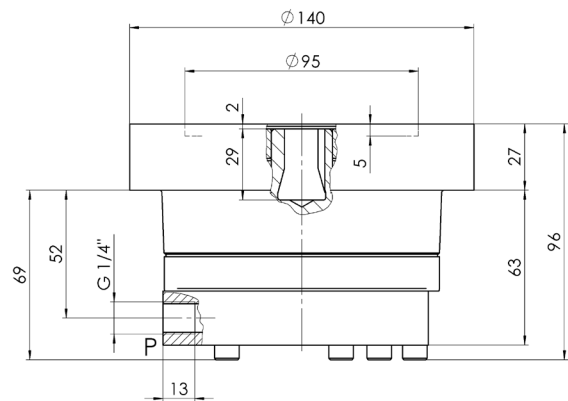
2) threaded bolts M8 x 35

2) hexagonal nuts M8

2) M6 screws

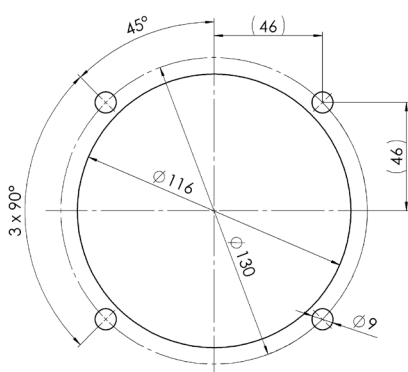
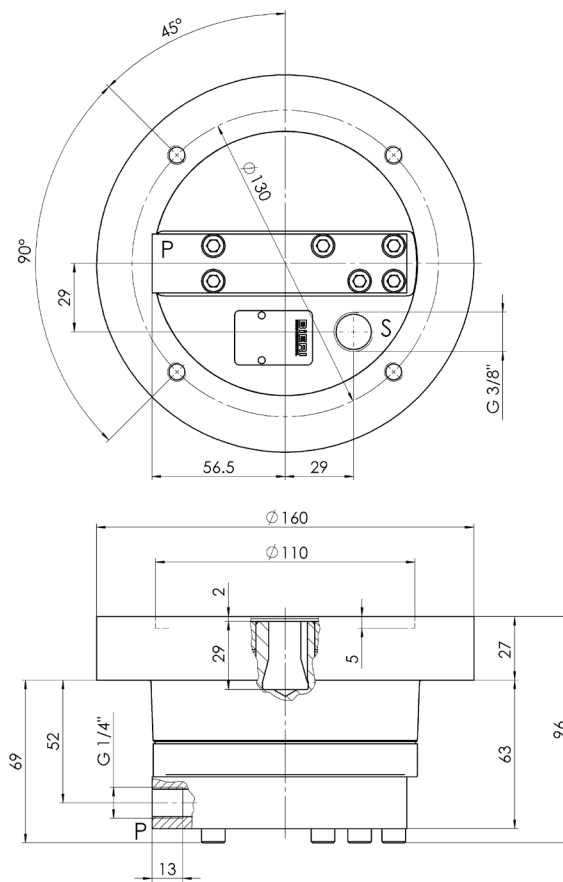
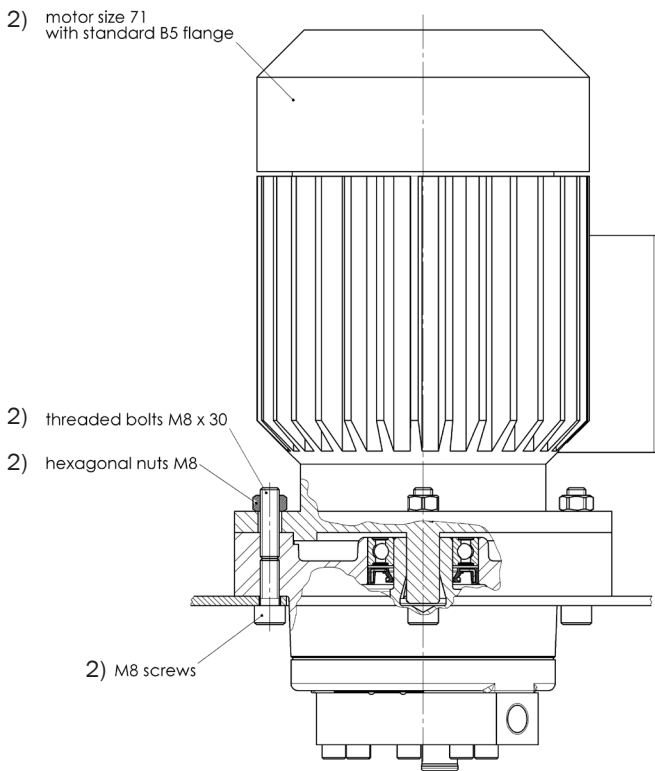


tank lid bore pattern

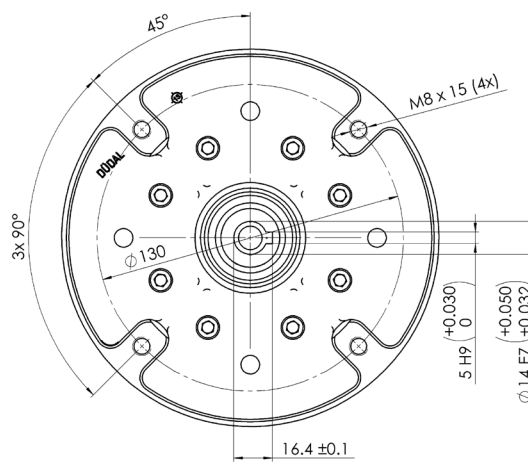


2) Not included in the scope of supplier

Size HRK02



tank lid bore pattern



2) Not included in the scope of supplier