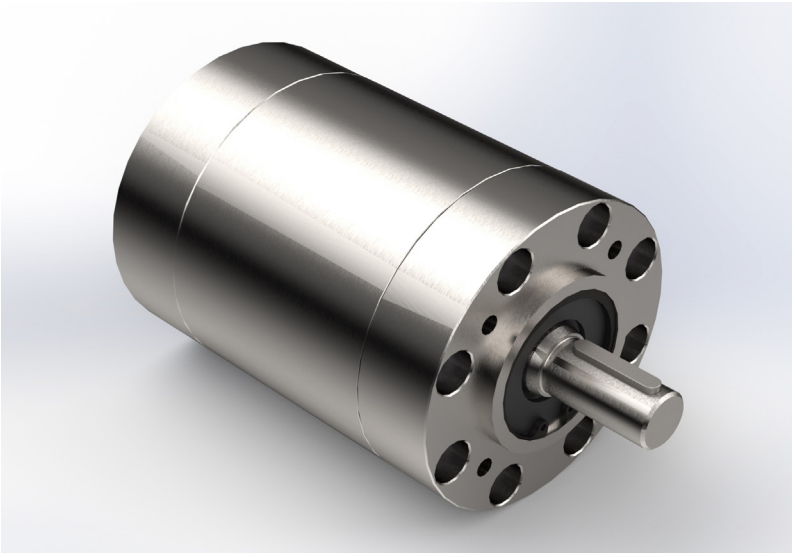
BIERI
HYDAC INTERNATIONAL

Axial piston pump

Type AKP110

up to **1050 bar**

1,68 to 2,32 cm^3/rev



Features

- High volumetric efficiency
- Self-venting and priming
- Robust design
- Use in all installation positions
- Self-lubricating construction
- Absolutely maintenance-free
- Low weight due to compact design
- CW and CCW usable
- Operation with low viscosity fluids
- External parts made of 1.4404 (AISI 316L)

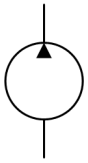
Applications

- Specially designed for demanding applications with continuous pressures up to 1050 bar
- Test benches
- Accumulator charging mode
- In use with frequency inverter
- Topside and under fulfillment of conditions in subsea applications hazardous
- Explosion hazard applications (according ATEX standard)
- Suitable for operation with media with poor lubricating capacity

Design

- Valve controlled on pressure and suction side (not usable as motor)
- Equipped with 5 pistons
- Rotating wobble plate
- Optimized piston design
- Optimized running surface
- Self-lubricating bearing
- 2-fold bearing-mounted wobble shaft

CE Ex II 2G Ex h IIC T4 Gb
Atex



Technical data

Hydraulic fluid	water glycol (HFC): approved for Castrol Transaqua HT2 and Mac Dermid Oceanic HW443 (others on request) mineral oil according to DIN 51524 (on request)	
Fluid temperature range	-20 to 60 °C	
Ambient temperature range	-20 to 40 °C	
Ignition temperature of hydraulic fluid	> 161 °C	
Viscosity range	2 to 220 mm^2/s	
Max. operating pressure	1050 bar	
Operation pressure suction side	-0.2 bar to 0.5 bar gauge pressure	
Displacement volume	1,68 to 2,32 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	1800 rpm	
Direction of rotation	CW and CCW	
Suction height	max. 500 mm	
Weight	see overview "Product information"	
Materials	pressure cover and housing: driving shaft and pump body:	steel 1.4404 (AISI 316L) steel

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up to 1050 bar
1,68 to 2,32 cm³/rev

Type code

Example | AKP | 110 | - | ATEX | - | 1,68 | - | 1050 | - | P | - | A | | 00 |

Axial piston pump		
Size	110	
Version	ATEX	
Displacement volume [cm³/rev]	1,68 ... 2,32	
Max. operating pressure [bar]	1050	
Seal material	P	NBR

Design
00 ... 99
For internal purposes

Index
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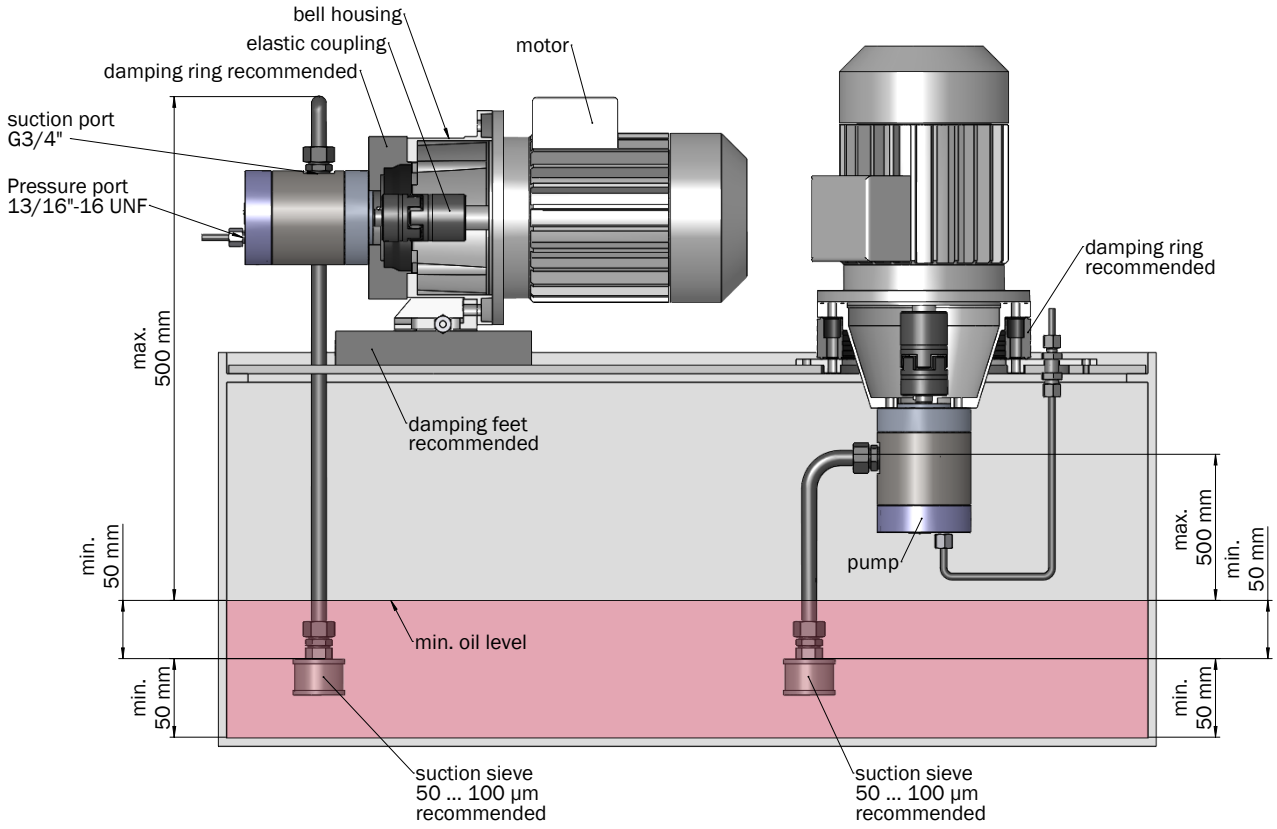
For internal purposes

Design revision
For internal purposes

Mounting



Product information

size	displacement volume [cm³/rev]	max. operating pressure [bar]	number of pumping elements	weight [kg]	max. torque [Nm]	max. power [kW]	part. no.
110	1,68	1050	5	9,5	40,13	7,71	on request
110	2,11	1050	5	9,5	50,40	9,68	on request
110	2,32	1050	5	9,5	55,41	10,65	on request

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. 0,7 (1050 bar)

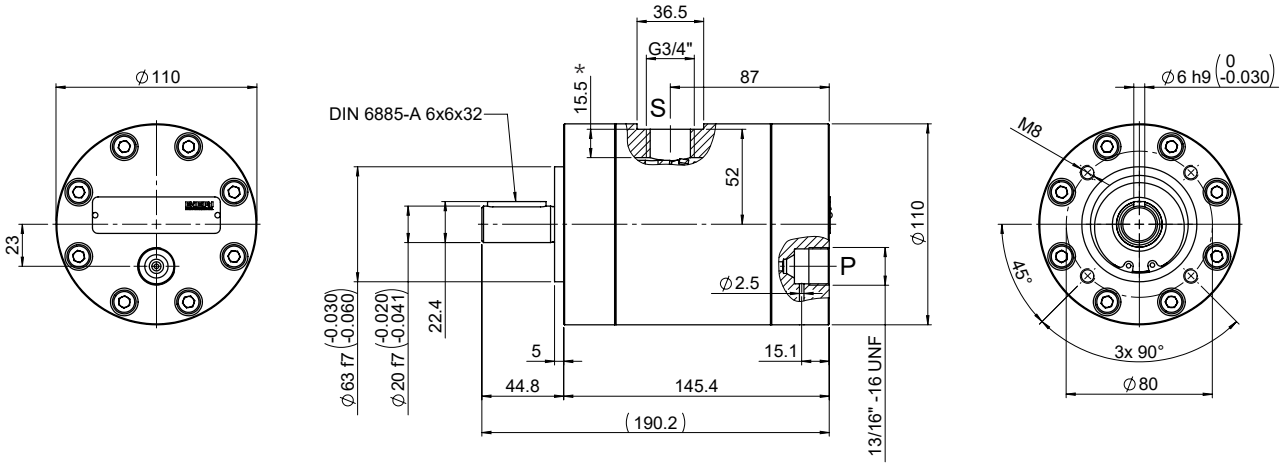
k = pulsation factor
5 piston: k approx. 1,02

Calculation of driving motor torque

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

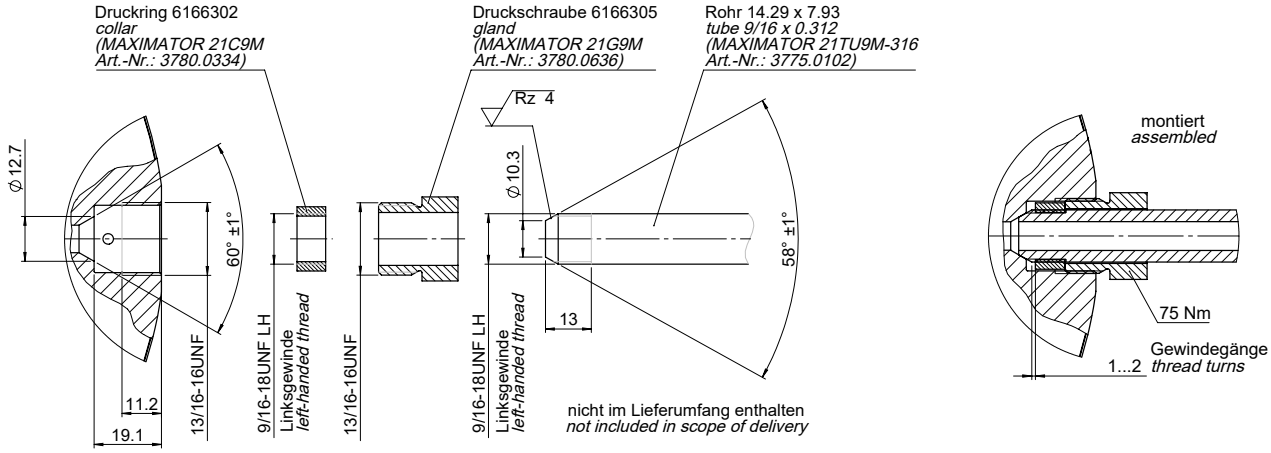
M = torque [Nm]

Dimensional drawing



* Note! screw-in length: max. 16 mm

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



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