

Gear metering pumps
ADP



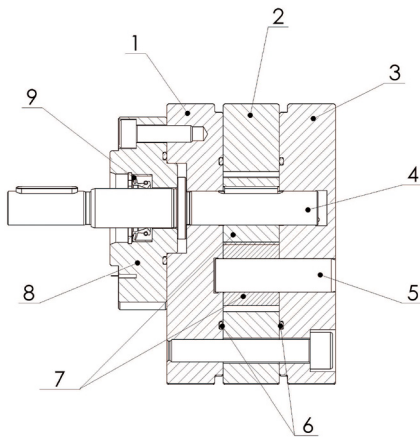
KRACHT®
FLUID TECHNOLOGY AND SYSTEMS

Content

| | |
|--|-------|
| Construction Description Materials Overview | 4 |
| Shaft end seals | 5 |
| Versions | 6 |
| Type key | 7 |
| Dimensions | 8 – 9 |

General characteristics / Technical data

I Construction



- 1 Front plate
- 2 Center plate
- 3 Rear plate
- 4 Drive shaft
- 5 Arbor
- 6 O-rings
- 7 Gears
- 8 Seal carrier
- 9 Shaft sealing

I Description

The ADP is a high precision external gear metering pump. With extremely small clearances and an optimal gear geometry the ADP has a very high volumetric efficiency also at difficult combinations e.g. high pressure together with low turning speed and low viscosities.

The main parts of the pump are made of stainless steel. Because of that a wide range of fluids can be pumped. For various kinds of applications different types of radial lip-type seals, a stuffing box packing or a magnetic coupling are available. On request the ADP can be supplied as a pump-motor unit.

I Materials

| | |
|-----------------------|------------------------|
| Pump plates | Stainless steel 1.4112 |
| Gears | Stainless steel 1.4112 |
| Drive shaft and arbor | Stainless steel 1.4112 |
| O-rings | FKM, PTFE |

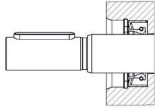
I Overview

| | |
|---------------------------------------|--|
| Nominal size in cm ³ /rev | ADP-1 0.1 · 0.3 · 0.6 · 1.2 · 1.8 · 2.4 · 3.0 · 4.8 · 6.0 ADP-2 12.0 · 20.0 |
| Clearance group | S small clearance M medium clearance L large clearance |
| Direction of rotation | clockwise (facing shaft end) |
| Max. Operating pressure (Outlet side) | p _b max. 150 bar (depending on viscosity, speed and motor power) |
| Speed range | 10 ... 200 1/min (depending on pressure, viscosity and motor power) |
| Viscosity | v _{min} 1.0 mm ² /s (depending on pressure and speed) v _{max} depending on inlet conditions, speed and motor power |
| Media temperature | -20 ... 200 °C |
| Ambient temperature | -30 ... 120 °C |

Shaft end seals

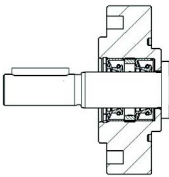
I Variants

Single radial lip-type seal



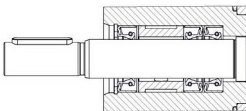
| Materials | Pressure inlet side | Media temperature |
|-----------|---------------------|-------------------|
| FKM | 0 ... 10 bar | -20 ... 150 °C |
| PTFE | 0 ... 5 bar | -20 ... 200 °C |

Double radial lip-type seal



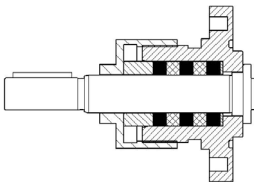
| Materials | Pressure inlet side | Media temperature |
|-----------|---------------------|-------------------|
| FKM | 0 ... 10 bar | -20 ... 150 °C |
| PTFE | 0 ... 5 bar | -20 ... 200 °C |

Triple radial lip-type seal



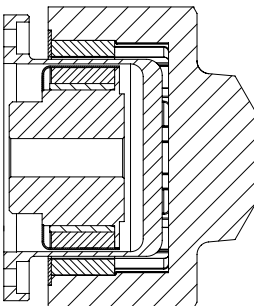
| Materials | Pressure inlet side | Media temperature |
|-----------|---------------------|-------------------|
| FKM | 0 ... 10 bar | -20 ... 150 °C |
| PTFE | 0 ... 5 bar | -20 ... 200 °C |

Gland Packing



| Materials | Pressure inlet side | Media temperature |
|---------------|---------------------|-------------------|
| PTFE/Graphite | 0 ... 50 bar | -20 ... 200 °C |

Magnetic coupling



| Materials | Pressure inlet side | Media temperature |
|-----------------|---------------------|-------------------|
| Stainless steel | 0 ... 10 bar | -20 ... 150 °C |

Versions

I Available types

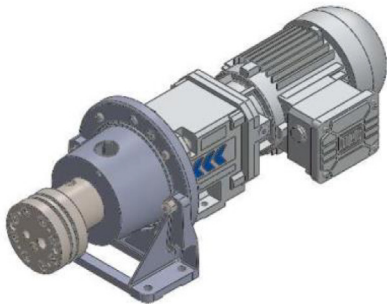
Pump with free shaft end



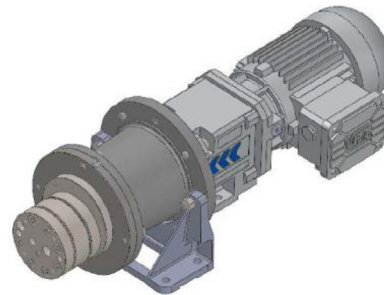
Pump with free shaft end plus connection block



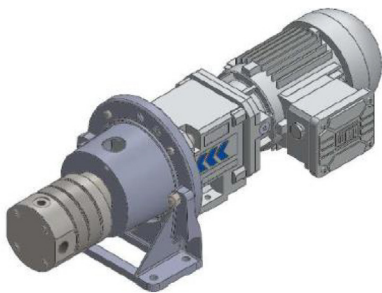
Motor-pump unit with mechanical coupling



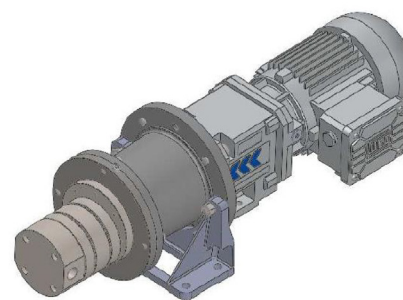
Motor-pump unit with magnetic coupling



Motor-pump unit with mechanical coupling
(pump with connection block)



Motor-pump unit with magnetic coupling
(pump with connection block)



Type key

Example

| | | | | | | | | | | |
|-----|---|---|-----|---|---|---|---|-----|----|----|
| ADP | - | 1 | 0.1 | S | R | F | A | EEF | N | 1W |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |

| 1 Product | |
|-----------|--|
| ADP | |

| 2 Series | |
|----------|-------|
| 1 | ADP-1 |
| 2 | ADP-2 |

| 3 Nominal size | |
|----------------|-------|
| 0.1 | ADP-1 |
| 0.3 | ADP-1 |
| 0.6 | ADP-1 |
| 1.2 | ADP-1 |
| 1.8 | ADP-1 |
| 2.4 | ADP-1 |
| 3.0 | ADP-1 |
| 4.8 | ADP-1 |
| 6.0 | ADP-1 |
| 12.0 | ADP-2 |
| 20.0 | ADP-2 |

| 4 Clearance group | |
|-------------------|------------------|
| S | Small clearance |
| M | Medium clearance |
| L | Large clearance |

| 5 Direction of rotation | |
|-------------------------|------------------------------|
| R | Clockwise (facing shaft end) |

| 6 Type of fixation | |
|--------------------|--------|
| F | Flange |

| 7 Type of pipe connection | | |
|---------------------------|-------------------------------------|-------|
| A | In: rear G 3/8" Out: rear G 1/4" | ADP-1 |
| B | In: rear G 1/2" Out: rear G 1/2" | ADP-2 |

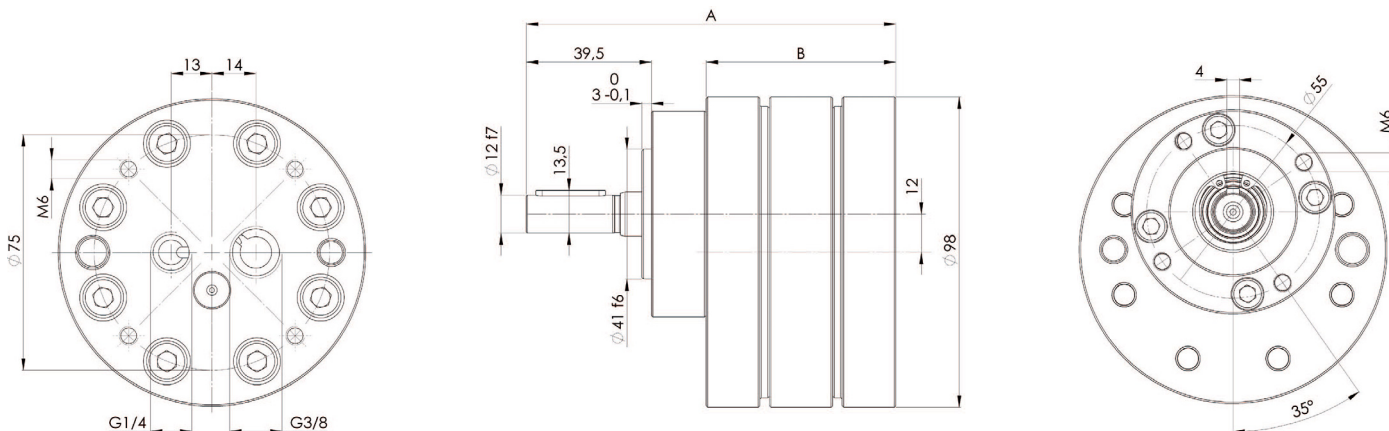
| 8 Material code | | | |
|-----------------|---------------------------------|----------------|---|
| EEF | Plates / Gears: stainless steel | Sealings: FKM | Without coating |
| EEP | Plates / Gears: stainless steel | Sealings: PTFE | Without coating |
| BEF | Plates / Gears: stainless steel | Sealings: FKM | With coating for fluids with poor lubricity |
| BEP | Plates / Gears: stainless steel | Sealings: PTFE | With coating for fluids with poor lubricity |
| BBF | Plates / Gears: stainless steel | Sealings: FKM | With coating for abrasive fluids |
| BBP | Plates / Gears: stainless steel | Sealings: PTFE | With coating for abrasive fluids |

| 9 Bearing | |
|-----------|-------------------------|
| N | Without bearing bushing |
| M | With bearing bushing |

| 10 Shaft sealing | | |
|------------------|--------------------------------|---------|
| 1W | Single radial lip-type seal | ADP-1/2 |
| 2W | Double radial lip-type seal | ADP-2 |
| 3W | Triple radial lip-type seal | ADP-1 |
| PA | Gland packing | ADP-1/2 |
| MK | Prepared for magnetic coupling | ADP-1/2 |

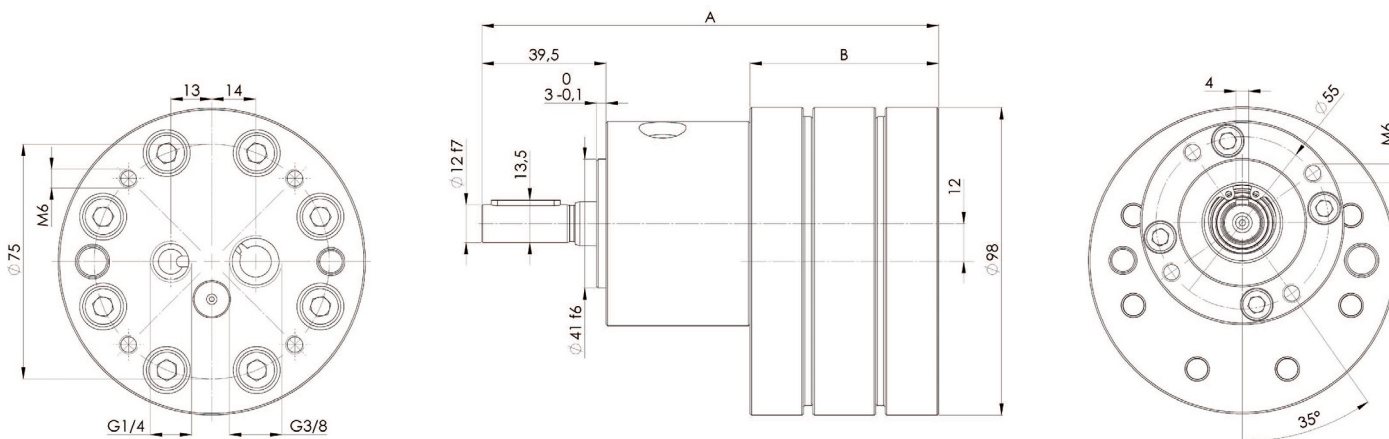
Dimensions

I ADP-1 – Single radial lip-type seal (1W)



| Nominal size | A | B |
|--------------|-----|----|
| ADP-1-0.1 | 99 | 42 |
| ADP-1-0.3 | 103 | 46 |
| ADP-1-0.6 | 109 | 52 |
| ADP-1-1.2 | 105 | 48 |
| ADP-1-1.8 | 109 | 52 |
| ADP-1-2.4 | 113 | 56 |
| ADP-1-3.0 | 117 | 60 |
| ADP-1-4.8 | 118 | 61 |
| ADP-1-6.0 | 123 | 66 |

I ADP-1 – Triple radial lip-type seal (3W)

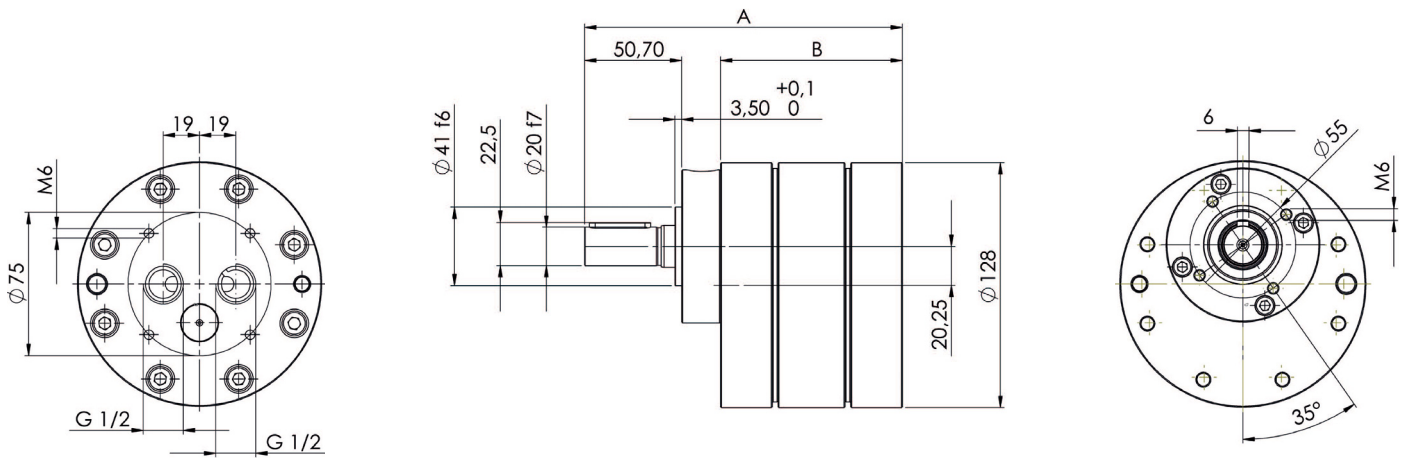


| Nominal size | A | B |
|--------------|-----|----|
| ADP-1-0.1 | 127 | 42 |
| ADP-1-0.3 | 131 | 46 |
| ADP-1-0.6 | 137 | 52 |
| ADP-1-1.2 | 133 | 48 |
| ADP-1-1.8 | 137 | 52 |
| ADP-1-2.4 | 141 | 56 |
| ADP-1-3.0 | 145 | 60 |
| ADP-1-4.8 | 146 | 61 |
| ADP-1-6.0 | 151 | 66 |

Dimensions in mm

Dimensions

I ADP-2 – Single radial lip-type seal (1W) / Double radial lip-type seal (2W)



| Nominal size | A | B |
|--------------|-----|----|
| ADP-2-12.0 | 152 | 81 |
| ADP-2-20.0 | 166 | 95 |

Notes

Notes

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